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EMISTRY OF INHALATION ANESTHETICS*

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The differing experiences which expert anesthetizers e had in the use of ethyl ethers supplied by various nufacturers in numerous surgical cases have prompted e present investigation of the chemistry of inhalation sthetics These differences are often not to be lained by idiosyncrasy Then, too, the standards down by the various pharmacopeias of the world not uniform In view of this fact alone, a thorough tigation seemed called for Inquiries addressed to consumers of the solvent in manufacturing proc- adduced further need for satisfactory methods of mining the purity of ethyl ether and chloroform, f detecting impurities introduced, or proving their ce if eliminated, in the modification of the raw pl cts used in their manufacture The presence of e amounts of substances has oftentimes been the th of a chemical reaction proceeding in a particular bo ion by virtue of a "catalytic action" So the pres- ar f even traces of certain substances, as for example, di dized compounds, aldehyd, etc, in ether, may have C l some reactions to be incorrectly explained or to d an unusual or unaccounted for route This is bu ubtedly true for many physiologic changes ph investigation of ether and chloroform naturally fo an examination of nitrous oxid and oxygen to esearches have been quite thorough and pursued fo eral years

NITROUS OXID[1]

1793 Deiman and others prepared nitrous oxid by m ing ammonium nitrate essentially the commercial ess for its manufacture to day,[2] as it is made by prod such a mixture of salts that ammonium nitrate prov f the bodies taking part in the reaction the commercial nitrous oxid is apt to contain these possibl es chlorin nitric and nitrous oxids, nitric acid, ia, hydrochloric acid, carbon dioxid oxygen, nitrogen and the rare gases of the air It is usually purified by passing the gas through solutions of sodium ydroxid, ferrous sulphate and sulphuric acid Further purification may be accomplished by the formation of a hydrate below 0 C and heating this hydrate (N_2O, $6H_2O$) by fractional condensation and by fractional distillation (to remove the rare gases of the air), but these methods are not practiced in this country

Table 1 which is self-explanatory, exhibits the results of our analyses of compressed nitrous oxid as supplied by American manufacturers

TABLE 1 — ANALYSIS OF NITROUS OXID OF AMERICAN MANUFACTURE

No	N_2O†	H_2O	CO_2	NH_3	O_2	N_2 etc by Difference	N_2O by Explosion	N_2O by $Cu + CO_2 + H$‡	N_2O by $Cu + H$‡
1	99 7	0 13	0	0 006	*	0 16	97 5	99 4	99 7
2	96 6	0 15	0	0 001	*	3 25	95 0	96 [illegible]	96 6
3	99 5	0 17	0	0 000	*	0 35	97 3	99 5	[illegible]
4	95 9	0 16	*	0 000	*	3 94	94 1	95 [illegible]	[illegible]

* Present † Actual percentage present ‡ New methods of Baskerville and Stevenson

Standards of Purity —Nitrous oxid which is to be used for anesthesia should contain at least 95 per cent of N_2O and no solids, liquids, combustible organic matter, chlorin or other oxids of nitrogen A small amount of carbon dioxid, according to the investigations of Gatch, can have no evil effects If present, however, the percentage should be known

ETHYL ETHER[3]

Ethyl ether is still made commercially by the historical process of treating alcohol with sulphuric acid — hence the misnomer of "sulphuric ether," or "vitriolic ether" — although other synthetic processes have been proposed, some of which have been tried out, but always without commercial success

The quality of ethers on the market depends on first, the purity or grade of the alcohol used, and, second secondary reactions which take place, not only with impurities in the alcohol, but with ethyl hydroxid itself For example, ethyl ether made from ethyl alcohol denatured by methyl alcohol contained other ethers as dimethyl oxid or methyl-ethyl ether not found in the ether made from rectified spirit The generous interpretation of the denatured alcohol act by our government officials whereby alcohol denatured by ether itself may not be used, eliminates these substances Many of the impurities traceable not only to the quality of the raw products used but t [illegible] ndary r [illegible] of their virgin impurities, [illegible] perature, pressure and other conditions, were removable and have in a large measure been removed, or much reduced, by subsequent purification

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* Read in the Symposium on Anesthesia in the Sections on harmacology and Therapeutics and Pathology and Physiology of e American Medical Association at the Sixty Third Annual Sess on held at Atlantic City June 1912

* Because of lack of space this article is abbreviated in The ournal. The complete article appears in the Transactions of the ection and in the author's reprints

[1] See Baskerville and Stevenson (Jour Ind Eng Chem August 11 No 8) for a detailed account of the preparation analysis and urification of nitrous oxid

[2] It is usually carried out by heating mixed salts as $NaNO_3$ d $(NH_4)_2SO_4$, $NaNO_3$ and NH_4Cl etc

[3] For a full consideration Baskerville and Hamor Jou and On ethyl ether for an Druggist Sept 20 1910

The specific gravity of ether intended for anesthesia should not exceed 0 720 at 15 C, provided that an ether containing minimum quantities of alcohol and moisture is required, an ether, however, which shows a specific gravity of 0 7215 (2 per cent absolute alcohol), 0 7227 (3 per cent absolute alcohol), or even 0.724 (4 per cent absolute alcohol), provided that the sole "impurity" is ethyl alcohol, is acceptable for anesthetic purposes according to various pharmacopeias

Presence of Alcohol in Ether—In this connection it may be stated that for various reasons a pure ether may be diluted with ethyl alcohol when it is to be used for anesthesia Impurities then observed may be due in part to the alcohol used in dilution Practically all ethyl alcohol contains some acetaldehyd

It has been asserted that ethyl alcohol serves as a preservative for ether when the latter is properly stored, which is not true, and small amounts interfere in no way with the application of ether in anesthesia The presence of alcohol is unnecessary except when ether is administered by the drop method In this case the presence of alcohol prevents too rapid volatilization and consequent chilling of the apparatus with which the ether is administered, and the alcohol remaining on the cone lowers the freezing-point of the condensed moisture of the breath The presence of excess moisture in liquid ether should be guarded against, since ether in contact with water, or moist air, in time gives rise to various impurities of an objectionable nature Thus anesthetic ether even of proper grade may develop impurities to be avoided quite as much as if they had been introduced in the original materials or later produced in the manufacture or added in the preparation for distribution in commerce

Assisted by W A Hamor, I have conducted an extensive investigation of the changes which occur in ethyl ether during storage, and the experimental data obtained lead to the conclusion that the oxidation of ether in the presence of moisture is productive of a series of complex conversions, initiated, however, by the formation of hydrogen dioxid

Our experimental work seems to establish beyond any doubt the fact that ether of anesthetic grade contains peroxidized compounds after exposure to varying temperature conditions and sunlight, in the presence of atmospheric oxygen, for considerable periods of time, especially when it is stored in colorless glass vessels, or in badly stoppered tin containers

Acetaldehyd, *the presence of* which may account for some of the observations made in practice, is one of the impurities most likely to be generated by exposing partially filled containers to varying atmospheric conditions for continued periods of time Ether should not be stored in glass vessels for any length of time without being tested for oxidation products before use, and the tin containers should be of such *capacity that they* need not be opened without being emptied when the ether is employed for anesthetic purposes

Since it is highly important that ether intended for anesthetic purposes should be carefully manufactured and properly stored, as prolonged exposure to light and air greatly affect the results of etherization, causing coughing, suffocation, and even dangerous after effects, such ether should always be tested for acidity, peroxids and aldehyd, and the presence of the last should be rigorously guarded against, or the ether, if so contaminated, should be *administered* by a method which eliminates these impurities before it is introduced to the animal system

We have made a study of the value of proposed tests for the impurities in ethyl ether, and used several new and superior ones A scheme for [illegible]mination has been worked out and is now available in literature[4]

CHLOROFORM[5]

Liebig prepared chloroform from chloral and treating acetone with "bleaching-powder" Guthrie and also Soubeiran treated alcohol with "bleaching-pow[illegible]" Scheiing generated his "bleach" in the presence of al[illegible]hol by electrolysis Then "methylated spirit" was us[illegible] whereby so called "methylated chloroform" was obtain[illegible] In 1848 Bottger and others used acetates, and th[illegible] chlorin was liberated in acetone by electrolysis T[illegible] process is used extensively in this country now Metha[illegible] of natural gas has been burned in chlorin, but this process has not proved successful commercially so fa[illegible] *Carbon tetrachlorid, made by chlorinating* carbon disu[illegible]phid, is being reduced by the process of A W Sm[illegible] to produce much chloroform in this country at prese[illegible] "Chloral chloroform" is imported in small quantities

From the variety of *Ausgangs-Material* and differe[illegible] methods used, it is quite evident that crude chlorofo[illegible] may contain a wide range of impurities, which [illegible] vary not only with the materials used, but also [illegible] the conditions of manufacture Alcohol has [illegible]en removed from chloroform by washing with water, [illegible]he chloroform being subsequently dried over cal[illegible] chlorid Potassium hydroxid has been used to re[illegible]ve excess chlorin and acids Manganese dioxid has [illegible]een used to remove sulphur dioxid Chloroform has [illegible]een treated with concentrated sulphuric acid until the [illegible]cid was no longer colored, and then the vapors of [illegible]oroform have been passed through towers of cryst[illegible]lized sodium carbonate, rectification has followed To re[illegible]ove special impurities or decomposition products of the chloroform itself chloroform has been treated with lead dioxid, with potassium permanganate, or with [illegible]ute sodium thiosulphate, or it has been distilled over 2 [illegible]er cent paraffin or poppy oil

"Chloroform Anschutz" is obtained by distilling from crystals of salicylid-chloroform ($C_{28}H_{16}O_8$, $2CHCl_3$) "Chloroform Pictet" is made by chilling chlorofor[illegible] to — 80 C, filtering off the solids produced, and then [illegible]ering *the temperature to* — 82 C *and* drawing off [illegible]e liquid impurities The frozen chloroform is then f[illegible]tioned, the intermediate 80 per cent of the distil[illegible]te being taken

Specific gravity determinations are not to be regarded as criteria of purity beyond indicating the amount of alcohol in chloroform

There has been not a little diversity of opinion among chemists as to the nature and products of the decomposition of chloroform, especially the changes which chloroform undergoes on exposure to air, in fact, this discordance dates from the introduction of chloroform as an anesthetic and prevails to day This condition is ascribable to the many influencing factors occasioned by the *degree of purity of the chloroform under examination* and the extent and nature of the exposure, but is principally due to the failure to consider and cor- [illegible] of only one c rectly interpret the rôle of the general variable, alcohol, and with it the accompanying moisture

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[4] Baskerville [illegible] Ind and Eng Chem III 305

[5] The histo[illegible]re purification physical constants decomposition and analysis [illegible] examination of chloroform of all grades [illegible]erville and Steven[illegible] by Baskerville and Hamor, Jour Ind [illegible]st 1912

The products of the decomposition of "pure" chloroform, according to various investigators, may be summarized thus

Chlorin, hydrogen chlorid Morson, Maisch and Hager
Carbonyl chlorid Rump, Regnault
Carbonyl chlorid, hydrogen chlorid Stark, Ramsay, Schoorl and Van den Berg, Dott
Carbonyl chlorid, chlorin Brown, Schacht and Biltz, and Adrian

The formation of carbonyl chlorid alone is definitely agreed on

The decomposition of chloroform has been universally conceded to be an oxidation process It is generally accepted that chloroform is unaffected by light alone, and that light, although it accelerates oxidation, is not a necessary factor in the process (Hager, Rump, Brown, Schoorl and Van den Berg), several investigators, however, appear to have inclined to the view that light favors decomposition (Regnault, Dott)

With regard to the changes which occur in anesthetic chloroform during exposure to air and light there also exists a decided diversity of opinion, principally owing to the fact that no examinations were made during the course of the various investigations, so far as I am aware, for the presence of the oxidation products of alcohol in such chloroform The whole subject required investigation, and accordingly an experimental study of the decomposition of both pure and anesthetic chloroform was carried out It was also hoped to throw light on, if not fully explain, the rôle of alcohol[6] and other substances in the so-called preservation of chloroform, a satisfactory explanation of which has been wanting

Various samples, twenty-three in all, both of pure chloroform[7] and of chloroform containing the usual pharmacopeial amounts of alcohol and water, were exposed in well-stoppered[8] containers of various sizes, these held varying amounts of the samples, and were of both colorless and anactinic glass, such as are customarily used in the trade The exposures were made for different periods of time, but at room temperature, 20 C, from September to May, inside of a window having direct southern exposure The conditions were extreme, but nevertheless were similar to those obtaining in many pharmacies and hospitals

The anesthetic chloroform used was examined prior to the experiments, and only such chloroform as was found to be free from all impurities was used An amount of water, however, equivalent on the average to 5 1 per cent by volume of the alcohol present was permitted Thus each sample was of pharmacopeial grade

The tests applied for the detection of the oxidation products of chloroform and alcohol were those previously proved out in our work Quantitative determinations of the impurities developed were made whenever it was possible to do so

RESULTS OF AUTHOR'S EXPERIMENTS WITH CHLOROFORM

The experimental results warranted the following conclusions

1 The products of the oxidation of pure chloroform are carbonyl chlorid and hydrogen chlorid, which come about according to the reactions

$$CHCl_3 + H\ O + O = COCl\ + HCl - H\ O$$
$$CHCl_3 + H\ O = COCl\ + HCl + H\ O$$

We are convinced that oxidation will not occur if water be excluded and the absolute exclusion of moisture appears to be impossible in practice Hydrogen dioxid is formed, although we were unable to detect it in the chloroform undergoing oxidation and therefore concluded that its existence is ephemeral and oxidation of the chloroform continues throughout the period of the exposure The rôle of the water is that of a true chemical catalyst The decomposition of pure chloroform is accelerated by light as was shown by a comparison of the results obtained in the experiments wherein colorless glass was used with those in which anactinic glass containers were employed Carbonyl chlorid is formed with increased readiness in the presence of acids

The extent of the oxidation is dependent on the nature of the container, the amount of air present the purity of the sample and the intensity of the light to which it is exposed With light alone, when no air is present no decomposition occurs for ordinary periods of exposure and in cases where there is air contact alone and no exposure to light the oxidation is slow

2 The products of the oxidation of anesthetic chloroform are primarily the oxidation products of alcohol and no decomposition of chloroform itself occurs while the oxidation of alcohol proceeds When the oxidation of alcohol reaches a maximum, decomposition of the chloroform goes on as in the case o pure chloroform with the exception that chlorinated erivatives of the oxidation products of alcohol may [illegible] The decomposition of the chloroform itself is re[illegible]d, even prevented so long as oxidation of the alco[illegible] proceeds, and the retardation is consequently dependent on the amount of alcohol present The extent of the oxidation is subject to the conditions referred to in the oxidation of pure chloroform It is important to note, however that anesthetic chloroform nearly always contains water, the usual amount being about 0 05 per cent by volume according to my experiences

The preservative action of alcohol is due to the combination of the retarder with certain of the reacting substances and any substance soluble in chloroform and readily oxidizable will exert an inhibitory effect on the oxidation of chloroform it elf, for example sulphur and many other substances All compounds which have been found to serve as preservatives of chloroform are reducing agents and the effect is due to their capacity for oxidation

THE STORAGE OF ANESTHETIC CHLOROFORM

Anesthetic chloroform should preferably be furnished in vials ampules or bottles of high grade anactinic glass containing about the quantity sufficient for one narcosis, and at the most not more than can be used within several days If for any particular reason chloroform is ordered in a large container it is advisable immediately after opening it to subdivide the entire remaining contents into 2 ounce bottle taking care to fill the small bottles completely It is important to see that the bottles are first completely free from water, and empty bottles should not be refilled without thorou[illegible]

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[6] The amounts of alcohol stated as permissible in the various official chloroforms intended for anesthetic purposes are as follows

Belgium	1 0 per cent
Denmark	1 0 per cent
Sweden	0 5 1 0 per cent
United States	0 6 1 0 per cent
France	0 005 part by weight.
Italy	0 5 per cent
S[illegible]	[illegible] cent, absolute

7 [illegible] elimination Other factors [illegible] to the method of the [illegible] constants were perature and moisture The anesthetics are [illegible] at 15 4 C the system at [illegible] Switzerland [illegible] ature This may were employed [illegible] bottles were plished his chloroform was prep the case of ether and author and was absolutely through heated water which boiling point + 61 2 C at 760

8 No cork stoppers unpro[illegible] removes the aldehyd but In the experiments on pure c[illegible] nt used solely [illegible] in hydre (Gwathmey method)

unmindful of its dangers and limitations We have about ten compound, complicated and complex nitrous oxid and oxygen instruments on the market, each costing from $100 to $300, weighing from 40 to 80 pounds, and occupying as much space as a sewing-machine Many of these instruments have so many valves and other parts as to suggest the need for an engineer's or chauffeur's license I am sure that we are a trifle dishonest at times about this sequence, and that though we use morphin, nitrous oxid oxygen and plenty of ether we call it a nitrous oxid and oxygen sequence

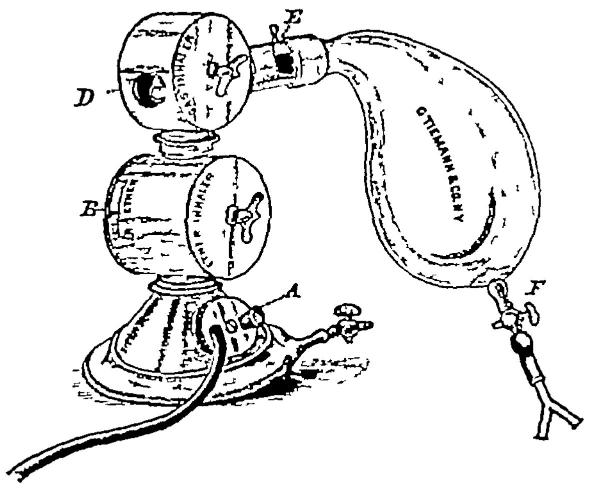

Fig 6 —The Bennett inhaler

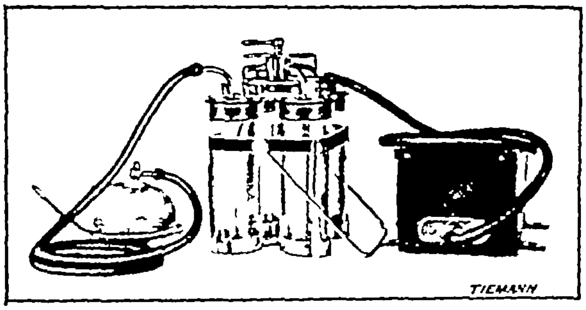

Fig 7 —Four bottle Junker vaporizer as modified.

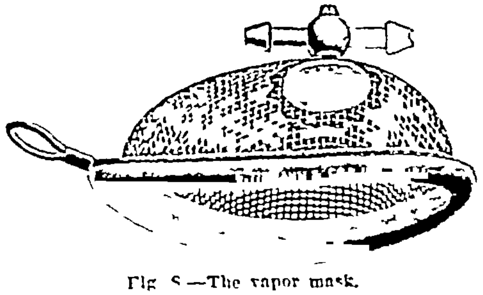

Fig 8 —The vapor mask.

Nitrous oxid and oxygen can easily be given in the following ways (1) Simply use a Y-shaped tube at the end of the gas-bag to connect the two gases (Fig 6 F) (2) Lead the oxygen direct from the tank to the Bennett inhaler by a rubber tube through one of the air holes in the face piece plugging the other air hole with a cork (Fig 6 A) The Bennett inhaler is used chiefly to induce anesthesia with the gas-ether sequence This instrument weighs only 2½ pounds, costs less than $50 and may be transported easily

My four-bottle modified Junker vaporizer (Fig 7) is an instrument allowing the easy and quick use of almost any anesthetic in any strength or combination and is particularly useful for head and neck operations One bottle can be used for warm water to warm the anesthetic vapor Personally I prefer to use it as a means of catching any overflow that may result from filling the bottles too full or when too much pressure is used Usually the other three bottles are used for ether and chloroform Two bottles are filled with ether, and when one becomes too cold, as often happens after using it for a few minutes, or becomes empty, the other bottle is used The vapor can be forced by a hand bulb such as is usually attached to a Paquelin cautery outfit or a small foot-pump or bellows The face or vapor mask which I use is similar to the ordinary face mask with an arrangement in the top for the distribution of the vapor in front of the nose (Fig 8) This vapor mask is useful in giving oxygen with ether or chloroform by the drop method The advantages of the so called vapor method are (1) less anesthetic is used (2) there are less nausea and vomiting, (3) the breathing is more like that of normal sleep, (4) the apparatus is out of the surgeon's way (5) the anesthetist's hands are free, (6) it will be found easy to change from one anesthetic to another, or to form any combination

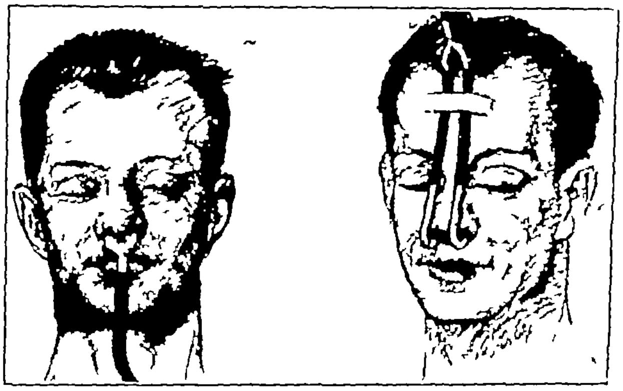

Fig 9 —Glass nasal tubes for general anesthesia in use

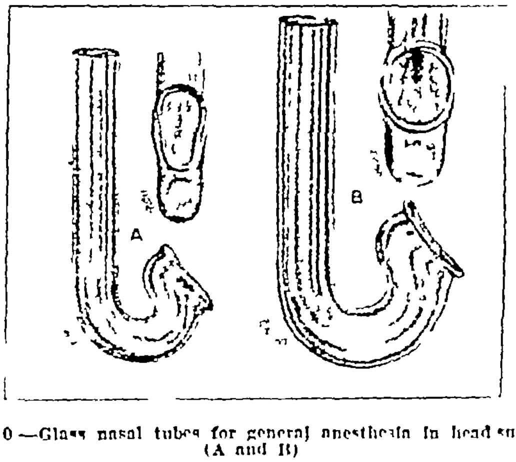

Fig 10 —Glass nasal tubes for general anesthesia in head surgery (A and B)

For special head cases I use glass nasal tubes (Fig 9) which have these advantages over the rubber tube (1) They allow the anesthetic vapor to become warmed by passing through the nose (2) they are more safely and easily introduced into the nose (3) they do not cause nasal hemorrhage, (4) they are not apt to become obstructed by blood and mucus, (5) they remain in position much better than do rubber tubes, (6) they are much easier to clean and sterilize

They are made in three sizes accompanied with a Y-shaped glass connecting tube which is used for operations on the upper part of the head (Figs 9 and 10)

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SPINAL ANALGESIA—DEVELOPMENT AND PRESENT STATUS OF THE METHOD

WITH BRIEF SUMMARY OF PERSONAL EXPERIENCE IN 1,065 CASES *

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Spinal analgesia proves no exception to the general rule which applies to new methods Its early development was fraught with mistakes some of which were serious and even fatal When it was heralded throughout the world that Bier had successfully injected cocain into the spinal subarachnoid space, many surgeons adopted the method It was a new field and little was definitely known concerning the physiologic aspects of the question, and little more with reference to the therapeutic phases of the subject It was but natural that as the literature of spinal analgesia developed, the number of unfortunate experiences multiplied It was inevitable, too, that enthusiasm should wane, and that the further development of the method should be left to a limited number of surgeons who recognized in spinal analgesia a procedure of distinct advantage, with a definite field of usefulness

Following Bier's first demonstrations of the surgical application of spinal analgesia, report of which was published in 1899, the method was quite extensively employed for two or three years Accounts of its use then disappeared almost entirely from medical and surgical literature, though it was not abandoned by the few earnest advocates of the method The revival of the subject in the literature about five years ago is familiar to all It is safe to assume that spinal analgesia is now permanently established among recognized surgical procedures, and will never again so nearly approach abandonment as it did during the short period of quiescence which followed its first few years of popularity

A just estimate of the merits of any method can be reached only by a study of the accumulated experience of many observers It is manifestly impossible on this occasion to trace the evolution of spinal analgesia by a review of the literature which chronicles the findings of the large number of surgeons who are now employing or have employed the method

During the early stage of the development of spinal analgesia cocain and eucain were the agents most generally employed This fact probably accounts for many of the adverse opinions formed of the method Eucain gave a "patchy and hence altogether unsatisfactory analgesia Cocain was not entirely satisfactory partly because of the reckless dosage employed by many surgeons and partly because of the difficulties experienced in sterilizing the drug without destroying its analgesic effect or decomposing it in such a way that its by-products gave rise to unpleasant accompanying or postoperative phenomena Bier early protested against the reckless manner in which cocain was being employed, and against the dangerously large doses which some operators used He made a plea for an effort to find less harmful drugs for the production of spinal analgesia

A very important part of the evolution of spinal analgesia has been concerned with the discovery of other drugs and other combinations which would give a controllable analgesia, and at the same time lessen the dangers and eliminate the frequently disagreeable accompanying symptoms associated with the method In the endeavor to find such a drug a great deal of careful experimental work has been conducted by different investigators The results have been remarkably successful and have given to the method a definite field of usefulness

My experience with cocain was not so unfavorable to that drug probably because at an early stage of the development of spinal analgesia I formulated a plan of sterilizing the agent[1] which insured not only a sterile but a fresh and active solution free from the harmful by-products so often claimed to be present and generally attributed to the methods of sterilizing by heat

It is not necessary here to enter into the question which from time to time has been raised concerning the validity of the claims that cocain is decomposed by heat and its analgesic properties destroyed as a consequence Whether correct or incorrect the impression has gained currency that boiling decomposes solutions of cocain Various methods of sterilizing this agent have therefore been suggested The simplicity of the method which I have employed renders it of value for emergency work, where a rapid method is required to secure a sterile, potent solution The method, which is applicable to other analgesic agents as well as to cocain is as follows

Five grains of fresh cocain crystals carefully weighed are placed in a sterilized measuring glass Two drams of strong ether are added and mixed thoroughly with the cocain crystals by means of a sterilized glass rod until a paste is formed The mixing process is continued until all the ether is evaporated and a dry powder is obtained One-half to 1 ounce of boiled filtered water or sterile normal salt solution is then added One-half ounce makes practically a 2 per cent solution and 1 ounce a 1 per cent solution The dosage varies according to the age of the patient the region to be operated on etc from 5 to 25 minims of the 2 per cent solution and from 10 to 40 minims of the 1 per cent solution

The crystals, if kept dry do not deteriorate as do other forms of the drug It is advisable however if possible to employ only fresh crystals or to be sure that they have been kept perfectly dry With active cocain at one end of the scale and inert cocain at the other there are various grades of potency from an analgesic point of view The exact cause of this variation is a matter of dispute some holding that it is due to the heat sometimes employed in sterilization others denying the correctness of this assertion The members of the Section on Pharmacology and Therapeutics will doubtless clear up this point in the discussion

Following the suggestion of Bier that less harmful agents be found for spinal analgesia experimentation has led to the employment of the following [illegible] stovain novocain tropacocain beta-eucain [illegible] lactate alypin holocain hydrochlorid [illegible] anesthesin and other agents Cocain, stovain, novocain and tropacocain are the drugs most generally used, with stovain, perhaps, in the lead

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* Read in the Symposium on Anesthesia in the Joint meeting of the Section on Pharmacology and Therapeutics and the Section on Pathology and Physiology of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

[1] Bainbridge Med Rec New York Dec 17 [illegible]

Other drugs than cocain having been found available for spinal analgesia, attention was next directed toward making such combinations of these with other substances as to render the solution heavier or lighter than the cerebrospinal fluid, the object being to avail oneself of gravity in controlling the height of the analgesia Experimentation along this line has led to some very interesting results, and has evolved three general classes of solutions (1) those of lighter specific weight than the cerebrospinal fluid, (2) those of approximately equal weight, (3) those of heavier weight

To the first class belongs the so-called "diffusible" solution employed by Babcock, in which alcohol is used to render the fluid lighter than the cerebrospinal fluid

To the second class belong the simple solutions of the analgesic agent with water, with water plus cerebrospinal fluid, with cerebrospinal fluid alone, or with normal salt solution

To the third class belong the so-called "non-diffusible" solutions, which are rendered heavier than the cerebro spinal fluid by the addition of glucose, dextrin or gum arabic

To any of these solutions may be added, if desired, epinephrin or some similar product, as employed by Bier, Gray and many others, or strychnin, as suggested by Jonnesco

In 988 of my 1 065 cases simple solutions, of the second class, were employed, the agent being sterilized after the manner described, and dissolved in plain sterile water, without the addition of any other drug In over 500 of the 988 cases cocain was used In the remainder the various other agents and combinations were employed I now use, as a rule, stovain or tropacocain, because fewer unpleasant symptoms are apt to ensue, but I do not hesitate to employ cocain

In the 1,065 cases there was one death (with the diffusible stovain solution, probably due to status lymphaticus), one case of temporary partial paralysis with complete recovery,[2] one case of failure due to so-called "dry spine," in which puncture at different levels failed to bring cerebrospinal fluid, two cases with alypin, in which there was considerable respiratory depression, and one case of idiosyncrasy in which, after several attempts by spinal and local injection, the analgesia was almost nil In all the other cases there were no accompanying or post-operative symptoms of permanent or serious moment

ILLUSTRATIVE CASES WITH THE THREE CLASSES OF SOLUTIONS

SIMPLE SOLUTION (COCAIN WITH WATER)

Case 1—J P D, aged 31, was operated on Nov 27, 1902 (case of Dr William T Scovil, of Richmond Hill Long Island), under spinal analgesia, which I administered The patient had been operated on two years before by Dr George Ryerson Fowler for appendicitis, at which time ether anesthesia was employed The patient suffered for a year and a half from postanesthetic asthma of such severity that it was necessary for him to sit up at night in order to breathe This gradually subsided and for six months before I saw him he had not been troubled with it When I was called in consultation, the patient was suffering from multiple strictures, which had become so tight that there was almost complete retention of urine A filiform bougie could not be passed Albumin and casts were present in the urine Chronic endocarditis further mplicated the condition The patient's testimony was absolutely necessary in a forthcoming murder trial in which circumstantial evidence was so strong against the defendant that a verdict of guilty was almost a certainty Nothing but the patient's testimony could save the man

Treatment—To operate under inhalation anesthesia was practically impossible It was determined, therefore to employ spinal analgesia Cocain, 20 minims of a 2 per cent solution, was injected and external and internal urethrotomy performed Analgesia lasted two hours and ten minutes The patient read and smoked during the operation In two weeks he went into court, gave his testimony and cleared the defendant. The patient, who is still living and in a fair degree of health, has never suffered from asthma since the operation under spinal analgesia—an interesting coincidence at least

Case 2—Mrs M D, aged 43, was admitted to the New York Skin and Cancer Hospital in October, 1911 Examination revealed a large deep tuberculous ulcer of the left leg, 6 by 5 inches in diameter, of three years' duration On Dec 20, 1911 the ulcer was excised, and the surface exposed to fulguration according to the de Keating Hart method, with the long high frequency, high tension, electric spark Analgesia in this case was induced by means of 20 minims of a 2 per cent solution of cocain Eight minims injected at first proved insufficient, and after ten minutes another injection of 12 minims was made Analgesia was complete to the nipple line in four minutes and lasted over an hour There were no accompanying or postoperative symptoms of any moment, convalescence being entirely uneventful

GLUCOSE EPINEPHRIN STOVAIN SOLUTION (NON DIFFUSIBLE)

Case 3—L L, female, aged 58, was admitted to the New York Skin and Cancer Hospital, March 18 1911, for operation for lipomas of the abdominal wall, papilloma of neck angiomas of abdominal wall and varicose veins of the legs The operation was March 20, 1911 Various growths were removed, and the varicose veins excised Analgesia was induced by the glucose epinephrin stovain so called non diffusible solution obtained from Gray, of London one ampule, 2 c c, 3 per cent stovain being injected Adjuvant medication consisted of strychnin, 1/60 grain, and nitroglycerin, 1/200 grain Analgesia extended to the neck, and lasted for one hour and fifty five minutes There was no nausea, no vomiting, no headache, or other unfavorable symptoms The patient was cheerful throughout the operation, her facial expression giving no evidence of pain or distress Recovery was uneventful

The only death which I have to chronicle in my 1,065 cases occurred when the Babcock "diffusible" solution was employed It may be stated in advance however, that the fatality is not necessarily attributable to this agent

STOVAIN ALCOHOL WATER (DIFFUSIBLE)

Case 4—The patient, a male child, aged 2, on my service at Randall s Island, New York City Children's Hospital and School, was in very poor general condition, with chronic bronchitis, some dulness in the chest and distressing inflammation and prolapse of the rectum Operation was definitely indicated, and inhalation anesthesia was positively contraindicated It seemed justifiable, therefore, to attempt to relieve the condition by operation under spinal analgesia An injection of 0 5 c c of the Babcock diffusible stovain solution was employed The child died almost immediately after the injection was made Autopsy was not allowed, but from the apparent slight enlargement of the thymus gland which was present, the dulness in the chest, and the general appearance of the child, it may be that death was due to that more or less mysterious condition known as status lymphaticus We may give the diffusible solution the benefit of the doubt

The following case illustrates the successful application of the method by means of the diffusible solution

Case 5—J R, female, aged 50, was received at Randall s Island Operation, Dec. 14, 1911, consisted of panhysterectomy for fibroid tumors of uterus and cystic ovaries, the incision and suture of "Lane s bands" and appendectomy Preliminary medication consisted of 1/4 grain mo p'un

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and 1/200 grain atropin hypodermically half an hour before operation Spinal puncture was made in median line between first and second lumbar vertebrae, 3 c c of stovain alcohol solution injected, at 10 15 Analgesia was complete to nipple line at 10 19 Median abdominal incision was made at 10 25 patient experienced no pain or discomfort Exploration revealed three distinct peritoneal bands narrowing the lumen of the ileum and causing marked angulation at the crest of the pelvis These were sectioned and sutured and the appendix removed This part of the operation was completed by 10 45 and panhysterectomy begun At 11 o'clock the patient complained of discomfort due to the stretching of the abdominal wound, but cutting, suturing or clamping the tissues caused no pain Her condition at this time was excellent At 11 30 patient asked for a drink of water, which was given her, with a small quantity of whisky Respiration and pulse were regular, and the expression of the face revealed no real discomfort There was no nausea, no vomiting and no coughing at any time during the operation The color of the skin remained good throughout Operation was completed and abdominal wound closed at 12 noon Patient left table at 12:05, talking quietly, and in excellent condition Analgesia persisted for one hour after completion of the operation At no time did the patient's temperature rise above 101 degrees F There were no postoperative complications recovery was uneventful, and at the end of the third week the patient was walking around the ward perfectly well

The patient in this instance was an ideal illustration of the field for spinal analgesia She was old beyond her years, with some thickening of the arterial walls, with abnormally small kidneys, excreting urine of low specific gravity, with some albumin and casts There was no postoperative interference with the action of the kidneys such as would very probably have occurred after the administration of ether

With certain notable exceptions, both the experimental and the clinical investigations of the early period of the evolution of spinal analgesia were concerned with the production of analgesia below the diaphragm, and its application to the surgery of these regions It is not to be wondered at, however, that the advocates of the method were unwilling, in many cases, to rest with this limited field of application to the lower parts of the body, and that they began to extend it to the parts of the body above the diaphragm

Tait and Caglieri of San Francisco, Morton of the same place, Chaput of France, and others, performed operations on various parts of the body above the level of the diaphragm, as early as 1900 thus antedating this particular part of the work of Jonnesco of Bucharest by about eight years Tait and Caglieri, in 1900 reported three cases in which cocain was injected into the sixth cervical space, without untoward effects The patients were examined weeks after the injection and found to be free from any complication Similar results were obtained by others

So far as I have been able to ascertain, the work of Tait and Caglieri, Morton, Chaput and others with high injection has not been followed up with further clinical applications, and for this reason perhaps originality in this regard has been generally accorded to Jonnesco The "new method" of spinal analgesia reported by Jonnesco in 1908 consists in piercing the spinal column at all levels, according to the operation and injecting stovain, novocain or tropacocain with strychnin, into the subarachnoid space As is well known, Jonnesco considers the fact that the respiratory nerves are not involved in the high injections as due to the influence of the strychnin

I have never employed the high injection method of Jonnesco, in either the original or the modified form (in which he confines the injection to the superior dorsal and the dorsolumbar sites) I have been able however in some instances to operate on practically any portion of the body under spinal analgesia as induced by the various solutions plus the head high or the head low position of the patient Years ago I used strychnin and glonoin hypodermatically as supportive and corrective medication at the time of the spinal injection The only thing new in Jonnesco's method so far as strychnin is concerned is injecting this drug with the analgesic agent, into the canal

The evolution of spinal analgesia was not completed with the discovery of less harmful agents as suggested by Bier With the perfection of combinations of the analgesic agents with other substances giving a more or less diffusible solution and a consequently more or less controllable analgesia and with the extension of the application of the method to the upper part of the body, the indications and contra-indications for the method have also been carefully studied and no inconsequent part of its development is concerned with the widening of the scope of spinal analgesia

One of the most telling illustrations of this increased sphere of application is its use with children In the earlier days of spinal analgesia perhaps the majority of writers on the subject named infancy and childhood among the contra-indications Even now many advocates of the method do not approve of its use in this class of patients

In the early stage of the application of spinal analgesia I began to employ the method being particularly interested at that time in its use in young children Several cases of children operated on under spinal analgesia were reported by me,[3] the youngest being 3½ the oldest 11 years old The former patient was apparently the youngest on whom the method had been employed at that time I reported an additional series of forty cases,[4] twenty-four of which were given in detail the youngest being 7½ and the oldest 19 years of age In July of the same year I reported twelve operations[5] on infants and young children the youngest of this series being 3 months and the oldest 5 years of age

Since that time a large number of children have been operated on by various surgeons the most notable series of cases being that reported by H Tyrrell Gray of the Hospital for Sick Children London He employed the method in all abdominal work on children holding that when it is used the mortality record in such cases is materially lowered

Along with the perfection of the method in the matter of agents, sites for injection scope of application etc, there was much to be evolved with reference to the preliminary preparation of the patient the selection of the analgesic agent best suited for the given case the careful estimation of the dose required for the individual patient and the actual technic of injection

As the method has been developed, various needles and syringes for the injection have been devised and the technic has been varied to suit the ideas of the *individual operator* Time does not permit nor is it necessary to detail the different modifications of the method The technic which has answered my needs best is given below

PRELIMINARY PREPARATION OF PATIENT

Preliminary preparation of the patient [illegible] diet catharsis etc which is of great importance [illegible] inhalation anesthesia is not so essential in spinal analgesia except in operations on the intestines. In a certain percentage of cases incontinence of urine and feces occurs from relaxed sphincters when rectum and bladder have not been emptied. Patients coming into the hospital from the street, with no preliminary preparation, have been operated on as successfully, and with as few accompanying and postoperative phenomena, as have those who have been subjected to the most careful preparatory care. Generally speaking, however, attention to all details which conserve the patient's vitality and comfort should be observed.

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[3] M [illegible] Rec New York [illegible]

[4] Med News May 4 [illegible]

[5] Arc [illegible] Ped July [illegible]

A hypodermic injection of morphin (1/6 to 1/4 grain), combined in some cases with atropin or scopolamin, may be given half an hour before spinal puncture. It serves to tranquilize the patient and to make him less susceptible to any possible pain or discomfort contingent on the initial procedure. Bromids instead of morphin may be given the day before or nitroglycerin (1/200 to 1/100 grain) may be advantageous, administered at the time of injection. Strychnin (1/60 grain) given subcutaneously at the time of the spinal injection is supportive. Combined with nitroglycerin it lessens the danger of headache, shock and other disagreeable symptoms.

No preliminary medication is given to children.

APPARATUS

The apparatus for giving the injection of the analgesic agent consists of a syringe and two cannulas.

The syringe, which is made by Ford and Company or the Kny-Scheerer Company of New York, is entirely of metal, including the piston, so that it expands uniformly on boiling. It has a capacity of 5 c.c., the corresponding quantities in the two systems being graduated on the piston.

The cannulas are made in two sizes, of three lengths. The points are ground short and beveled, with a cutting-edge all round. The shank is of flexible metal, so that it will bend without breaking. The cannula slips on a ground joint, fitting accurately the handle, without washers or screws. The proximal end is fitted with a handle which can be firmly grasped. Through the cannula runs a stylet, the proximal end of which is rounded, knob-like, so that it can be pressed against the base of the index finger, adding firmness of grip.

The entire instrument can be taken apart and thoroughly sterilized.

TECHNIC OF INJECTION

The usual aseptic precautions are observed. The site of puncture may be cleansed in the usual way, by scrubbing, etc., or by painting the skin with tincture of iodin. The patient, in the sitting posture, the feet hanging over the side of the table, with the puncture site painted with iodin, is draped with a sterilized sheet. This sheet has cut in it a hole or window large enough for purposes of injection. The operator in making his examination and identification of landmarks runs no risk of contaminating his hands by contact with skin surfaces which have not been rendered aseptic.

The site of puncture is now determined in the following manner:

1. The highest points on the crests of the ilia are located. On this level is the spinous process of the fourth lumbar vertebra.

2. The sites of the second, third, fourth and fifth lumbar vertebrae are marked.

3. The thumb is placed in the space between the twelfth dorsal and first lumbar, second and third, third and fourth, or fourth and fifth lumbar vertebrae, according to the selection of site, *at the mid-point between the two*. One half inch to either side of this is the site for the puncture. I usually inject between the fourth and fifth *or third and fourth lumbar vertebrae.*

The puncture point being located, the assistant plays a spray of ethyl chlorid on the area, or, if preferred, a preliminary subcutaneous injection of cocain or other local analgesic agent may be given. A small incision *is now made through the true skin, which may be* rendered hemostatic as well as analgesic by the ethyl chlorid.

The needle is passed through the incised skin and subcutaneous tissue, *straight forward*. The head is then depressed, the point being made to go upward, forward and inward toward the median line. It is inserted from 1½ to 2½ inches, according to the thickness of the *patient's body.*

When the needle is felt to impinge on the bone surrounding the foramen, it is depressed a little more and *pushed forward when it comes on the ligamentum subflavum, then the dura mater. In piercing the ligament* and dura there is a peculiar sensation like the "popping" of a membrane. This signifies the entrance to the subarachnoid space.

*The cerebrospinal fluid escapes under ordinary circum*stances. If it does not flow freely something is wrong. The needle may not have entered the right place, or it may be clogged. A stylet should not be inserted into the needle. Another syringe should be ready, and with this, if one cannot draw out blood or fluid, the needle should be withdrawn entirely and then, after being rendered patent, reinserted. I prefer not to proceed with the *injection unless the fluid issues with at least* an approximate quantity and tension. Others, notably Gray,[6] are not agreed on this point, being willing to *proceed with the injection when the fluid issues only in* slow drops, or when it is slightly blood-stained.

In some cases, despite careful technic and repeated attempts at different sites, no cerebrospinal fluid is obtainable. Such cases have doubtless led to the expression "dry spine," but it is rather to be inferred that they come under the category mentioned by Gerstenberg and Hein,[7] Lusk[8] and others, in which the arachnoid membrane is adherent to the posterior surface of the cord at the levels entered, so that no fluid is obtained for the reason that at the given locality, the subarachnoid space is obliterated posteriorly. I have had one such personal experience. Despite four attempts, in each of which the canal was entered, two between the fourth and fifth, one between the third and fourth, and one between the second and third lumbar vertebrae, no fluid was obtained. The attempt was then abandoned and the operation (appendectomy) successfully performed under ether anesthesia.

The analgesic solution is now injected slowly. The obliquity of the passage of the needle has the advantage that no tract is formed for the fluid to follow as the needle is withdrawn. The body of the vertebrae in front should not be touched with the needle, because of the presence there of a large plexus of blood-vessels. When the needle is withdrawn a cotton and collodion dressing is applied.

If low analgesia is desired for operations on the lower part of the body, the patient should be allowed to sit up *for a few minutes after the injection, or the head should* be elevated, when solutions of the same or heavier specific weight than the cerebrospinal fluid are used If the lighter fluid is employed, it must be borne in mind that the head must be lowered *at once* after the injection to prevent the rapid diffusion of the analgesic agent and the danger of death from respiratory paralysis When high analgesia is desired for operations on the upper parts of the body, the patient may be placed in a more or less marked Trendelenburg position, with the heavier solutions The "diffusible" solution may be used if after the initial lowering of the head, the head of the table is slowly and carefully elevated My own feeling is that operations on the head and neck should not be undertaken under spinal analgesia unless other methods are absolutely contra-indicated and operation is essential

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[6] Gray: Lancet, London, Sept. 25 and Oct. 2, 1909.

[7] Gerstenberg and Hein: Ztschr. f. Geburtsh. u. Gynäk., 1908, lxi, 524; also Verhandl. d. Gesellsch. f. Geburtsh. u. Gynäk., Berlin, 1907-1908.

[8] Lusk: Ann. Surg., October, 1911.

SUMMARY

From the weight of conflicting testimony with reference to the indications and contra-indications for spinal analgesia, it may be deduced, in a general way, that, granting the need of operation and the impracticability of local or regional analgesia *the indications for spinal analgesia are the contra-indications for inhalation anesthesia* So far as the character of the operative procedure is concerned, there are practically no contra-indications to the employment of spinal analgesia A person already in marked shock or profoundly septic should not be subjected to this procedure A number of surgeons with wide experience accept practically no limitations to its use Some operators firmly believe that in certain cases this method is safest and best

The real objections to spinal analgesia in my opinion are

1 The operator is absolutely committed to the dose, whatever it be It can be increased by an additional injection, but it cannot be decreased once given With the changes in the position of the patient, with carefully graded dosage, control can be exercised

2 In prolonged operations the analgesic effect may pass before the surgical procedure is finished In some cases, as in laparotomy, it is quite inconvenient to turn the patient over for another injection

It would be safe to assume that even its most enthusiastic adherents would not advocate the usual employment of spinal analgesia by the surgical novice It must, therefore, continue to occupy a somewhat limited sphere until further accurate and scientific experimentation has led to more certain conclusions with reference to the physiologic action of the agents employed and the dosage in which they may be used to obtain a given result Until such information is definitely in hand spinal analgesia should be employed, as a rule only by those experienced with the method and having careful technic

34 Grammercy Park

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS BASKERVILLE, ALLEN, GWATHMEY, MILLER LUMBARD, TETER AND BAINBRIDGE

Dr. F J Cotton Boston The question of doing better work in anesthesia is largely one not of diminishing the deaths 'on the table' but of diminishing those indirectly due to the anesthetic There are for instance the deaths from ether from lung complications. It was a short series of deaths from that source that made me take up nitrous oxid oxygen anesthesia As Dr Teter has said it is the anesthetic of choice for routine work when it can be administered by experts Both this and spinal anesthesia are expert propositions they will not become surgical routines for big hospital clinics That however, is no reason against their use where we can have our own way

I have not had a large experience with spinal anesthesia I think that proper administration makes it safe and satisfactory I have had it given a good many times by Dr Allen and Dr Richardson of Boston, and have found it satisfactory The cases in which it seems to me that it would not be satisfactory to use any other form of anesthesia are those of diabetic gangrene and those of seriously damaged kidneys These patients do better under spinal anesthesia and I have been afraid to use nitrous oxid on them The objection to spinal anesthesia in addition to the fact that it requires an expert to administer it is twofold first, on the part of the patient and secondly, on that of the surgeon First, there are patients on whom it cannot be comfortably used, even if one anesthetize such a patient at the head by talking to him he is more or less nervous Second, it takes long practice to do work with any kind of anesthesia when consciousness on the part of the patient is not abolished To do good work under such conditions takes a rather callous temperament or long practice There is great convenience in having a visible supply of gas Oxygen is the only gas of which it is important to have a visible measure but it is convenient to have a visible supply of both Some form of bubbling arrangement is necessary— to enable one to see whether the oxygen is flowing The development of cyanosis is so prompt under nitrous oxid and oxygen that if there is any hitch there is trouble very soon Anything that gives information on this point is rather worth while Dr Teter has not spoken of the furthering of an even flow by working from low pressure This advantage is commonly accepted to-day, though it is relatively new in the handling of this anesthetic method

Prof Yandell Henderson New Haven Conn I urged yesterday in the House of Delegates (and it seems to me that the matter of statistics tends to bear out the point) that deaths under anesthesia are not really due to anesthetics, but to anesthetists That is if we are going to diminish the deaths under anesthesia we must have capable anesthetists— I am not giving an expression of opinion one way or another as between nurses and interns The principal point that the Committee on Anesthesia urged was that everything should be done that can be done to recognize anesthetists—to have a department of anesthesia for every large hospital and to put it under the control of the attending anesthetist, as the medical or surgical work is under the control of the attendant in medicine or surgery This work should be managed by the attending anesthetist just as it is by Dr Allen at the Massachusetts General Hospital This is of the utmost importance Dr Teter spoke of the quantity of carbon dioxid that is allowable In an early paper, I set the limit at 5 per cent That is too low, but there were not sufficient data at that time to enable us to know how much would be safe It is clear now that it is quite safe to go to 10 per cent, and very likely 15 would not be dangerous

The New York Society of Anesthetists, which was organized last winter, has been the means of bringing the anesthetists in the neighborhood of New York into personal contact, which is important for their mutual advantage and the advancement of anesthesia, and they have felt that it would be well to have a national society of anesthetists It seems to me that to bring the anesthetists all over the country into contact and give them a feeling of solidarity so that they may work together and insist on their rights is most necessary

Dr W Wayne Babcock Philadelphia My experience in spinal anesthesia does not date back so far as Dr Bainbridge's but eight years ago I began to use spinal anesthesia and since then I have employed it in nearly all cases in which the operation was below the level of the nipple except when the patient or the family physician expressed a prejudice I began with heavy solutions and found difficulty in securing uniform anesthesia Gradually I worked away from the heavier solutions and used the lighter, and found that the range of the anesthesia became greater Finally by adding alcohol to reduce the specific gravity, I found I could produce an anesthesia that would involve any part of the body even to the top of the head. The specific gravity of the anesthetic being less than water, if the patient sat erect it would soon rise to the upper cord. This fact involved certain danger, and I soon discarded the high anesthesia, and as a rule limited the use of the anesthetic to operations below the nipple. There is an apparent general misconception as to the nature of spinal anesthesia; it is not a cord anesthesia but a nerve-root anesthesia. Therefore with higher injections, the patient may be completely paralyzed in the upper part of the body, but still capable of using the legs and with tactile and other senses preserved in the feet, showing that the conducting paths in the cord functionate although certain nerve roots are involved. This is important, as when the anesthesia is rather high, paralysis of the nerves controlling the diaphragm results in the abolition of diaphragmatic breathing. As this occurs, the chief muscles of the chest having been thrown out of function, the patient may by accessory muscles make ineffective efforts toward respiration. If such a patient be left alone, he will die; but if artificial respiration be instituted, even though the dose of the spinal injection be large, the patient will again start breathing, although perhaps not for fifteen or twenty minutes. The anesthetic has little influence on the heart, and by artificial respiration the patient may be kept alive, even after tremendous doses of the anesthetic.

Spinal anesthesia is contra-indicated in conditions that prevent the efficient use of methods of artificial respiration. It is especially useful in heart disease and in the other conditions described by Dr. Bainbridge. In regard to the objections, first that the patient is conscious, Dr. Bainbridge has shown how patients may almost enjoy the operation. Some, indeed, do seem to enjoy it. Those who are nervous, on the other hand, may readily have their higher centers abolished by injections of scopolamin and morphin. There is more and more a tendency to use narcotics so that the patient comes down to the operating room in a "twilight sleep."

Dr. R. C. Coburn, New York: Clover was the originator of the beneficial method of rebreathing, but it was on a very unscientific basis until the work of Henderson, who presented it in such a light that it is now susceptible of almost universal application. I strongly disagree with one of the speakers, who said that nitrous oxid is administered by rebreathing on account of the money that this saves, and that there is no principle involved that renders it safer, such as the matter of the increased carbon dioxid in rebreathing. While it is true that under nitrous oxid anesthesia there is less shock than under any other form, and that the anesthetic per se does not produce shock, yet under its influence there is a smaller amount of carbon dioxid in the blood, and therefore a greater call for its retention than with any other anesthetic. As a corroboration of Henderson's theory as to the effect of the retained carbon dioxid in the administration of anesthetics I want to cite personal observation that in abdominal operations in which the viscera are exposed and there is opportunity for the carbon dioxid to transpire into the surrounding air, the patient will tolerate a double amount of rebreathing, i. e., twice as much as in other conditions in which there is little exposure of the capillary blood-vessels.

A point in the administration of ether that corroborates this is that when a patient is under a light anesthesia the shock is greater than under deep anesthesia, especially in abdominal operations. It is my experience that in the administration of ether when one uses an extra amount of rebreathing, keeping the carbon dioxid at normal or more, the patients will undergo operations under light anesthesia with practically no shock. I believe that this is due to the increased carbon dioxid provided through the extra amount of rebreathing. In abdominal operations in which the operation has been especially made the carbon dioxid has the opportunity of transfusing into the surrounding air, and it is much lower in such operations than in those in which there is no such opportunity for the carbon dioxid to pass off into the air. While it is true that rebreathing in the administration of nitrous oxid reduces very materially its cost, I am quite sure that it is not the proper reason to give, and I am quite sure that the men who have been primarily engaged in the production and the promotion of nitrous oxid anesthesia with rebreathing have not placed their work on that basis.

Prof. Yandell Henderson, New Haven, Conn.: I did not say what Dr. Coburn thinks I did. What I said was that the method of rebreathing started as a question of cost. I would say that we have no exact measure of rebreathing in the individual patient, and until we have some clinical measure of rebreathing it is not on an exact basis.

Dr. Robert H. Ferguson, East Orange, N. J.: While I use the open drop method almost exclusively in my work I now merely call attention to my belief that about 92 per cent. of all the ether anesthesias in the United States are by the open drop method. This opinion is formed from a careful scrutiny of all the statistics I can get together with personal observations made in many hospitals in over 75 per cent. of the states of the Union. Further, I believe that when anesthesias by this method have not been so good as were desired, the failure has been due to unskilful administration, perhaps aided by an improperly arranged apparatus, rather than to the method itself. A point, then, I wish to make is this: that instead of endeavoring to bring out new apparatus and multiplying methods we ought to concentrate our attention on one simple procedure, such as the open drop method, and perfect it. After its range of usefulness is determined it will be right to study exhaustively another method, if the first is unsatisfactory. Experimentation in anesthesia ought, however, to be of the most conservative kind, since the safety and comfort of the patient is involved. To a mind impressed with such a necessity, the little advance made in a simple method of administering ether during the last twenty-five years is a matter of regret.

As regards anesthetic statistics, we should be very patient, not content with a small number, with those of one locality only or with any of a doubtful or limited value. Dr. Cotton has suggested that the majority of our anesthetic statistics are of small value. I believe that such is the fact chiefly because they are not complete. As an illustration let me say that it has been my duty, from time to time, to investigate so-called anesthetic deaths in various parts of the United States. Often when my attention has been called to one death I have found nine or ten in that vicinity. Again, while on the train, coming to this meeting, a surgeon told me that the hospital with which he was connected averaged five chloroform deaths a year although his patients always had ether. I could give other illustrations. Now practically none of these deaths are reported in print. Some were mentioned at meetings of local societies but were you or I collecting data for statistics of anesthetic deaths none of these cases would be available. I think these facts are strikingly conclusive of the untrustworthiness of our anesthetic statistics. I wish that every hospital and every surgeon would realize the importance of putting on permanent available record every death, directly or indirectly due to the anesthetic, together with full details of the case.

Dr. T. D. Buchanan, New York: I want to report without pride two unsuccessful cases, merely as a warning and possibly a help to some of you as surgeons or anesthetists, in diagnosing the same thing that I ran across. After fifteen years of specializing in anesthesia in New York City without any deaths, I came across two cases in two weeks and lost both patients, one under ether and one under gas and oxygen. Both patients had enormous fibroid tumors of the uterus; both were pretty well exsanguinated by frequent hemorrhages, and both died very suddenly in the midst of the operation. Now statistics with regard to deaths on the table are very hard to get. The causes of the deaths of this sort in the hospitals with which I have been connected were hard to find. Each time that I went to investigate one the surgeon would say that it was an anesthetic death and the anesthetist would say that it was caused by shock. That is why we cannot get statistics. In my own cases of fibroid the deaths were due solely to the anesthetic I make this excuse for myself, however that in a number of fibroid cases there is fibroid degeneration, not only of the uterus, but of other parts and tissues of the body, and frequently of the heart There are numerous authorities for that statement, and I believe that this is what I encountered I have known other deaths to occur following fibroid operations, ten or twelve hours afterward, but not on the table The first case might have been due to my not paying attention to the anesthetic, but the second surely could not have been, because I had just had a warning a week before from the other fibroid case, and was watching every second The second death, as I have said, occurred under nitrous oxid and oxygen We should have a very wholesome respect for these cases and not keep the patients in the Trendelenburg position longer than necessary, and the anesthetist and surgeon should avoid throwing even the slightest strain on the heart

Dr A F Erdmann Brooklyn, N Y I take this opportunity of thanking some whose names I cannot recall for sending to me the sample anesthetic charts for the society and other libraries I have a collection of nearly a hundred, some of them are certainly queer Three or four are very long, a number are very short, some contain only few details, others have space for numerous data, most of them omit important matter, so valuable that I cannot see of what use they really are As a matter of fact, few charts are properly kept, mainly, I believe, because the intern realizes that pulse rate, amount of anesthetic used and length of time of operation tell practically nothing of the course of his labor May I suggest that we go over our charts again to see if there is not something to add to them that will make them more interesting to yourself or to some one else, and which will give them a value for those who like Dr Gwathmey are endeavoring to gain knowledge of this subject for the common good? Until we use good charts and have them kept conscientiously we cannot expect to be able to gather reliable statistics

Dr F R Widdowson, Philadelphia Dr Buchanan, in his discussion, brought up the subject of statistics I suppose, if he has had experience in looking up statistics of this character in a hospital, he has found them to be of little value, owing to the way in which these records are usually kept I think that the reason why Dr Gwathmey failed to get reports from many hospitals was their inability to render a report of value from the imperfect records If a hospital does not have a form, as Dr Erdmann has just said, on which the anesthetist can record the data concerning the administration of an anesthetic, the records regarding anesthesia will be very meager For those who teach and have charge of the anesthetic work in hospitals, the first thing is to have a "form" on which data are collected systematically If the administrator knows he has to make a record of these things on a chart, he will attend to his work in a more systematic manner, think of the different points, and derive more benefit therefrom I would say to the surgeons and anesthetists here One of the best things you can do is to have an official chart made for your hospital when you return If you have one, you can improve on it getting additional data Then when Dr Gwathmey or some other anesthetist tries to get statistics he will be able to get them satisfactory to himself and to you, and it will be a pleasure, for the hospital asked, to give them

Dr Frank W Pinneo, Newark, N J There are four principal elements necessary for the success of insufflation anesthesia, which the report of the Committee on Anesthesia recognizes, that is, first, the warming of the vapor in the insufflation apparatus The three other factors are maintenance of a steady air pressure a cock on the apparatus to determine and govern the delivery of vapor to the patient and a catch bottle to make it impossible for any liquid ether to be carried over to the patient We ought not to think nitrous oxid and oxygen useless because some ether has to be added and where such an exponent of it appreciates the little ether added it helps to broaden the field for nitrous oxid and multiply its users Dr Gwathmey also has pointed out the value of nitrous oxid, which is, as Hewitt said, 'the safest anesthetic known" There is a contra indication to its use in children under 5 years of age, but here straight ether is usually good, or, in competent hands, with caution, we may be able to use chloroform for induction (never after an initial period of "ether excitement')

Dr. F K Ream, Chicago I have been administering nitrous oxid and oxygen for over twenty years for the extraction of teeth This particular work led me to engage in hospital practice, and my work is largely limited to that now I have so completely covered the ground of the use of the various methods that I am really apparatus poor having purchased most of the outfits on the market, my experience has led me to the selection of two methods My method of choice is the Teter, using large nitrous oxid and oxygen tanks with continuous, uniform pressure, making it possible to obtain intrapulmonary pressure, as recommended by Dr Teter I cannot with any other method on the market obtain relaxation and control my patients without ether, as I can with the intrapulmonary pressure I consider all other methods substitutes I think that Dr Teter's methods and research have done more to eliminate and limit the use of chloroform and ether than those of any living member of the profession

I have recently had a series of cases in which I used Dr Coburn's apparatus for a mixed anesthetic and rebreathing In some of these, I did not use any ether whatever, and obtained splendid relaxation In cases in which that is possible, the patients, I believe, must be susceptible to anesthesia in order to bring about that condition but I am satisfied that I can obtain very much more relaxation from nitrous oxid and oxygen under pressure

Dr J W Heim, Louisville I disagree with the man who recommended the chloroform ether sequence for children to whom we do not wish to give chloroform straight. I think that is the most dangerous form of anesthesia If in giving an anesthetic the beginning is the most dangerous, why should we use chloroform, which is the most dangerous anesthetic at the most dangerous time? I would rather induce the anesthesia with ether

Dr W S Bainbridge, New York First, the early mortality from spinal anesthesia cannot, I think, be attributed to cocain but to the excessive dosage of cocain employed and the wrong technic From my own experience, I have learned that stovain and tropacocain are the spinal anesthetics of choice Still, cocain has been uniformly of value in my cases The only new thing about Jonnesco's method was that he put strychnin with his analgesic drug into the cord Stovain had been used before, the high puncture was not new strychnin had been used by others In 1901, I was personally employing strychnin under the skin to offset any bad effects of cocain in the subarachnoid injection

By using cocain low in the cord, I have been able to do operations on the top of the head and have had a number of cases of total analgesia I thoroughly believe that there is such a thing as preanesthetic anticipatory shock, and the person who says to a patient about to take any anesthetic Look what is going to happen," is giving him a certain amount of shock, with which the anesthetic has no right to be saddled Whenever possible, the mind as well as other organs of the patient should be properly prepared for any anesthesia I think that it is a safeguard to the patient for the surgeon to watch what he is doing There is likely to be less shock from unnecessary handling of the tissues when the patient is conscious

I have had children as young as three months sucking the bottle while the operation for incarcerated hernia was going on and only stopping their sucking of the bottle with a good, ravenous appetite, to give a cough indicating the general bronchitis that was present Waugh and Lane assert that the use of spinal anesthesia in acute abdominal conditions in children reduced the mortality about 20 per cent

Dr. Charles K Teter Cleveland What is the prevailing impurity usually found in nitrous oxid? I have had reported to me within a month two fatal cases in which nitrous oxid and oxygen were used death being due to impurities There are such peculiar symptoms manifested in such cases that the cause cannot be overlooked The patients have a very *peculiar greenish red color, and the blood seems almost* of a rusty hue Dr Clifford U Collins, of Peoria, Ill, reported a fatal case with these symptoms within the last month I have had two cases in which these symptoms arose and in both I found that my gases were impure I did not have the opportunity to have the gas analyzed, in order to find out what particular impurity produced the condition The patients were quite sick for a day or two but recovered I think that the impurity was probably nitric oxid

It has been said lately that all that was necessary to make the present nitrous oxid and oxygen apparatus an automobile was the addition of a carburator If nitrous oxid is the agent used to induce and maintain anesthesia and not as a makebelieve, a more or less complicated apparatus is essential At present it may be admitted that in the way nitrous oxid is administered by a good many people it is not the anesthetic They are really using the closed method of ether giving 3 or 4 ounces of ether in an hour but calling it nitrous oxid anesthesia It requires only an inhaler and a bag and a couple of cylinders to do this but if one depends on nitrous oxid and oxygen, only using the oxygen to eliminate the asphyxia, one must have more apparatus and also some sense to know how to employ it I have seen some men give anesthetics who, if they had to pass as stringent an examination in regard to the subject of anesthesia as a chauffeur has to pass in his examination, would fail

One must use common sense in employing positive pressure If it is used to such an extent that stress is thrown on the respiratory mechanism, one is using too much If there is strain, one should change the pressure There should be no strain In the average case, if one uses 6 to 8 mm of mercury pressure it will not hamper respiration in the least If this is too much, the pressure should be released. The reducing of pressure in a cylinder is important in securing a perfectly *even flow of the gases*

DR. A H MILLER, Providence, R. I It is a fact that there have been no reliable statistics of the mortality from anesthetics available, but I do not believe that this should be I believe that we can get valuable statistics of the mortality from anesthetics In the first place we must separate the deaths that occur as the result entirely of the anesthetics from those in which the anesthetic contributed to the fatal result and from those in which it had no effect *in producing the mortality*

DR. JAMES T GWATHMEY New York The statistics, as given this afternoon are certainly reliable, and more reliable than any heretofore taken Indeed, they are more reliable and of more consequence to us for they represent the results of statistics as given in the United States to day Dr Cotton, in his discussion, stated that he doubted their value, because he knew that many unreported deaths occurred under anesthesia, and also that postoperative deaths are probably not reported in these statistics It is a question whether any postoperative deaths are reported yet we know that they do occur after all anesthetics In the last month, I know of a case (a laparotomy) in which a local anesthetic was used The operation was successful, and a large tumor was removed the patient died a few days afterward from pneumonia The question is so complicated that if we go into the matter of collecting reports of deaths after operation it is doubtful whether even if we had the statistics of all postoperative deaths they would be as reliable as the statistics we have that can be compared with similar ones already in existence We know that anesthetic statistics are recorded in but few hospitals of America to day The fact that I sent out circulars to the hospitals started many of them in the work of compiling statistics and I would suggest that if it is known that statistics are being asked for they will be more careful in the future

Anesthetics are in a state of evolution There is no one accepted method of anesthesia As to the question of whether local spinal, morphin or pulmonary anesthesia alone or in combination is the best method, no one can say positively Therefore I should like anyone who is connected with a hospital that has not given statistics, to assist me by asking for a circular to fill in This report will be the first that has been made of reliable statistics in America

PROF CHARLES BASKERVILLE, New York As to the different prices of ethers, I would say that I make it a rule to pass on the quality, without inquiring about the price It is immaterial what the price is That involves a problem of manufacture which is not generally known, outside of what I have presented in the paper Some manufacturers make one grade of ether—anesthetic ether, they call it Some make just ether”—chemically pure ether (which is infinitely purer than the anesthetic ether), anesthetic ether, commercial ether Ether may be thus of three kinds and they may all be made in one way You know the class of labor that many manufacturers employ, and when they get to the packing, there is danger of mixing these ethers I have had some cases of that kind It might have been an accident, but it happened Some manufacturers of ether prepare only one grade anesthetic ether, and some manufacturers who make the different grades can afford to sell commercial ether at a low price They then rectify a little of that, so as to get just enough to keep their trade in the anesthetic grade It is a perfectly good ether, but if nothing was paid for it, they would lose nothing Every cent that they get for that is net profit. It costs them nothing to produce it

The truth is that when we gather statistics we do so for two purposes One of these is the matter of curiosity That is all statistics show in one way The other object is to learn something, and what we want to learn is how to get over the troubles that we have been having I am convinced that each drug has its specific action and the processes that go on in the human body are the same as those that we control in the laboratory, and that is the whole field of medicine If we can learn to control the different reactions we have the problem solved That is one thing about getting an anesthetic into the system Of course, I realize that it is dangerous for a chemist to trespass in a field of that kind, but I shall be out of town soon The anesthetic ought to be sent in approximately at the temperature of the body It should also be sent in approximately at normal humidity, and both of these have been accomplished by means of vapor anesthesia, whether nitrous oxid or other kinds if passed through water

An improvement on Dr Gwathmey's method is that of Dr Davis which consists in saturating vapor with water and warming it afterward, so that it enters with a degree of humidity of 60 or 70 per cent

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ANESTHESIA BY PHARYNGEAL INSUFFLATION *

FRANK WILCOX PINNEO, M D
NEWARK, N J

The ideal anesthesia includes four factors (1) an induction short, tranquil and not unpleasant to the patient, (2) a maintenance, surgical, even, featureless and so absolutely under control that it is but just deep enough each minute for the existing purpose, (3) a recovery prompt and complete (4) after-effects, *nil* i e without symptoms immediate or remote, in any organ, alimentary, respiratory circulatory or excretory It is true of every known method that as it approaches this ideal in some respects it recedes in some other, hence the need for adapting the anesthetic and its method of administration to the individual case, choosing the best combination of results attainable

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* Read in the Section on Diseases of Children of the American *Medical Association at the Sixty-Third Annual Session* held at Atlantic City June 1912

In the surgery of childhood — not a new subject but bound to receive more special attention — we are confronted, in anesthetics, with the pediatric problem of administering to an organism, embryonal in some degree, potent drugs to which it is peculiarly susceptible Hughes[1] points out in this connection that age and body-weight are as important as in feeding or medication The same authority shows the fault of a "smothering" induction, that the workable limits of a safe maintenance are very narrow that under 5 years of age any deprivation of oxygen is badly borne that liability to surgical shock increases, not diminishes with deepening anesthesia, and that detection of shock is especially important and not easy Kelley[2] of Cleveland, says that prolonged operations are bad for children and all can confirm this who have watched the vitality wane in one who may have gone through the first half hour very well Kelley also emphasizes the need of gentleness in manipulation of the delicate tissues of a child quoting Bloodgood[3] that 'rough handling of tissues and hemorrhage" are most productive of shock

UNIFORM MAINTENANCE OF ANESTHESIA

In the evolution of surgical anesthesia since its beginning with Long 1842 Wells 1844 and Morton 1846 the present age demands not so much discovery of new anesthetics as refinement of methods and greater accuracy in the use of the materials we have But this — to be practical and universal — must be accomplished without elaborate apparatus The report of the Anesthesia Commission of the American Medical Association,[4] just made public in the Handbook of the House of Delegates of this Association says "Recent developments in this field afford ground for the hope that we are to-day at the beginning of an epoch of progress in anesthesia unequaled since its original discovery and introduction The need is for an anesthesia featureless, safe, surgical, yet not more profound than immediately necessary The maintenance of this state is our chief concern, and is difficult particularly in operations about the throat and face where anesthetist and surgeon both need the same field Kocher, in his "Operative Surgery, says, "Even careful surgeons are still confronted with the great difficulty of maintaining the right degree of narcosis during a prolonged operation' The above-mentioned report of the Anesthesia Commission[5] also says

> As regards ether the two points to be emphasized especially are that *anesthesia* should always be induced quickly and that throughout its entire duration it should be as nearly uniform as possible It is not the anesthetist who at all times maintains uniformly deep anesthesia whose patient stops breathing This accident comes particularly to those who administer so irregularly that the patient at times comes nearly out of anesthesia and again is plunged into profound narcosis Anesthesia is good in proportion as it is uniform Offenses against this principle occur most frequently in adenoid and tonsil operations When the death of the patient (usually a child) results, it is assigned either to heart disease' or to an 'unrecognized condition of status lymphaticus It is probable that in most cases these deaths are merely the natural result of intermittent anesthesia and of the increased susceptibility induced by fear Under the ordinary methods the anesthetist and the operator are alternately in control of the patient's nose and mouth

Packard[6] has compiled a list of twenty-nine deaths from the anesthetic in tonsillectomy twenty-six of them being from chloroform none from ether That this especially concerns children is seen in that twenty-two of twenty eight patients were 12 years or under, five between 13 and 16, and one 20 years That intermittent anesthesia is very deleterious even deadly is reported by Yandell Henderson[7] with confirmation by Carrel in animal operations showing that renewal of the anesthetic after partial recovery is fraught with much danger His comment[8] on the case reported (death in stage of ether excitement under tonsillectomy) is

> The reason that 'unsuspected status lymphaticus" is so often invoked after tonsil operations lies less in any connection of the tonsils with the thymus than in the fact that ether is administered intermittently in such operations and the subject comes part way out of anesthesia

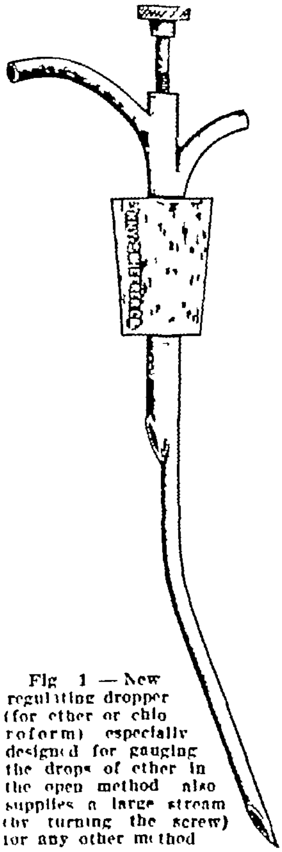

Fig 1 — New regulating dropper (for ether or chloroform) especially designed for gauging the drops of ether in the open method also supplies a large stream (by turning the screw) for any other method

He thinks that "status lymphaticus' has been made to bear an unreasonable burden of deaths from unexplained causes and adds

> If anesthetists will only realize that this (interrupting the administration of ether) is *a procedure which above all others should be shunned* the number of cases of so called 'status lymphaticus" under anesthesia will I believe show a sudden and marked decrease

The problems are not solved in simply choosing the method In the preliminary report of the Anesthesia Commission of the American Medical Association Cunningham and Anderson[9] giving a summary on the closed method of ether, cite as a disadvantage that the uneven administration (due to intermittent application) trespasses on the safety limit and predisposes to shock

But in adopting the open method[10] another difficulty confronts us The same investigators[9] found this so characterized by refrigeration the evaporation of ether on inhalation extracting so much heat from the lungs (for exhalations are warmed) that 'if refrigeration is a factor in postanesthetic pulmonary complications or shock the open or drop method must head the list as it extracts most heat from the patient The semi open *method, as with the Allis inhaler* is a compromise between the closed and open method standing nearer one or the other according to the freedom of air admitted or amount of rebreathing allowed That it must have great merit is shown by the great extent of its use and by the tendency I observe, in even those who think they are using the open method to withhold partially the patient's exhalations by a surrounding towel or even a partial impervious cover over the mask. Again how many do not drop the ether on but pour it more or less intermittently? If the drop method is chosen the ether should be administered by perfectly regular drops.

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[1] Hughes Kirmisson's Surgery of Children p 803

[2] Keller Surgical Diseases of Children pp 41 and 48

[3] Bloodgood Bryant and Buck's American Practice of Surgery ix 478

[4] Report of Committee on Anesthesia The Journal A M A June 1 1912 p 1908

[5] Ibid p 1909

[6] Packard Francis R Adenoid Operations The Journal A M A Aug 28 1909 p [illegible]

[7] Henderson Intermittent Ether Anesthesia Tr Am Surg Assn 1911 p 231

[8] Henderson Heart Failure Under Ether Surg Gynec and Obst August 1911 p [illegible]

[9] Cunningham O J and Anderson H C Methods of Administering Ether The Journal A M A [illegible]

[10] Herb I C The Open Method The Journal A M A [illegible] 1911 p [illegible]

A REGULATING DROPPER

To facilitate this I have designed a regulating dropper which may be set at any desired rapidity of drop or stream, is inexpensive and easily inserted in any cork. The best mask has rather than a thin layer of stockinette, enough layers of gauze, with coarse mesh to hold some vaporized ether (yet not enough to prevent breathing through it). This diminishes refrigeration and improves the volatilizing of the ether. I am confirmed in my opinion of the value of this by the judgment, in animal operations, of so accurate an observer as Alexis Carrel,[11] who says "I found that my animals lasted much better if the mask used to etherize had a large dead space so as to involve a considerable amount of rebreathing."

RECTAL AND SPINAL ANESTHESIA

For operations about the head, rectal etherization has been developed,[12] but its field must be very limited and dependent on a skilled anesthetist and careful preliminary preparation of the rectum. It adds rather than removes difficulties. Spinal anesthesia[13] has its field, but the untoward effects during operation and the aftereffects, according to Freeman Allen,[14] are such that, in spite of any indications for it in given cases, it can never wholly replace inhalation anesthesia with its adaptability in depth and control of anesthesia, to the age of patient and kind of operation—an adaptability especially promoted by the use of such means as I propose.

NITROUS OXID-ETHER SEQUENCE

In the search to combine the advantages of different anesthetics, the present age has come, happily, to the use of nitrous oxid preliminary to ether. Such a sequence must be sharply distinguished from mixed anesthetics such as the A. C. E. mixture, with their uncertainty and danger. Nitrous oxid, especially with oxygen, is most safe. In sequence with ether as by Gwathmey's apparatus it affords the advantages for induction and, if the ether following be administered conveniently for head operations we approach our ideal in maintenance as well as induction. Sequences have come to stay, and statistics prove they are safe. The Pennsylvania Hospital[15] in 11,167 anesthesias had eight deaths none under sequences but all among the 2,391 straight anesthesias three under ether five under ethyl chlorid. Nitrous oxid and oxygen followed by ether has much to commend it for with these under instant control by proper apparatus as Teter's almost any indication may be met, the ether being as Crile[16] has shown, an important factor in the administration. The disadvantages he enumerates include the apparatus and experience necessary, the venous congestion and incomplete muscular relaxation to which might be added the customary hypodermatic of morphin which in children is contraindicated. In this connection Crile cites a requirement in the administrator, which must appeal to the judgment of everyone having at heart successful anesthesia namely a certain personal equipment which affords "the keenest perception of the precise condition of the patient at every moment, i. e., the anesthetist must be a most delicate human recording apparatus."

PRELIMINARY MORPHIN

Bevan[17] and Herb[18] contend against the use, as a routine, of preliminary hypodermatics of morphin or scopolamin. This question has two scientific aspects: (1) that by its action on the cerebrum, morphin tends to block harmful sensations and, also, that it quiets the respiratory center, thus diminishing danger from acapnia produced by hyperpnea either voluntary or due to ether excitement. (2) that this very action toward paralysis of respiration removes one of the best safeguards of life, sensitiveness to the stimulation of carbon dioxid (vital, as Henderson[19] has shown) and of ether and hinders excretion and prompt recovery afterward. Alexis Carrel,[11] at the Rockefeller Institute, says, "I do not give morphin. I use only ether." For our present subject this applies only in so far as it concerns children and the severity and duration of the operation with its need for fortifying the patient against harmful sensations. Crile[20] has well pointed out that there are at work on the nervous system noxious influences which anesthesia does not prevent and suggests means for producing a state of anoci-association (absence of harmful associations). This has its chief application in the handicapped patient, i. e., one whose vitality is seriously impaired, as by infections or severe injury. In the case of children fear is easily overcome by judicious use of our knowledge that they have no natural fear, but that it is learned only by experience.

ANESTHETIST AND OPERATOR IN SAME FIELD

Considering the aims toward the ideal anesthesia which the above facts and opinions suggest and applying them for operations in and about the mouth or head, we find the following provisions indispensable:

1. After induction of anesthesia the anesthetic must be uninterrupted and capable of administration to any degree the exigencies of the case demand.
2. The operator and administrator must have equal access to the respiratory tract, each without interrupting the other.
3. Sufficient anesthetic must be admitted by either mouth or nostrils alone.
4. The ether vapor must be warmed, and the extraction of heat by the rapid evaporation of ether must be met by the constant supply of an equal number of calories.
5. Finally the method must be safe as against the possibility of pumping any liquid to the patient, and simple,[17] so that anyone, qualified for any anesthetizing, may use it with only the ordinary precautions.

The Junker inhaler for chloroform, which was brought out about 1860, consisted of a small 1-ounce bottle with inlet tube to the bottom for air and outlet tube from the top to the patient. Many deaths resulted from its use the files of the *British Medical Journal* contain many compiled reports Hewitt improved it with a double tube, to obviate the possibility of connections getting reversed and liquid chloroform being pumped to the patient Kocher in his "Operative Surgery" said "Rose declares that the introduction of Junker's apparatus is the most important advance that has been made in the matter of anesthetics"

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[11] Carrel quoted by Henderson: Surg. Gynec. and Obst., August, 1911, p. 162.

[12] Cunningham: Rectal Anesthesia, Boston Med. and Surg. Jour., April 2[illegible], 190[illegible].

[13] Chaput: Spinal Anesthesia, Edinburgh Med. Jour., 1908, xxiii, 243.

[14] Allen, Freeman: Spinal Anesthesia, Boston Med. and Surg. Jour., 1910, clxiii, 71[illegible].

[15] Lee: The Use of Ethyl Chlorid as a General Anesthetic in the Pennsylvania Hospital, Ann. Surg., 1908, xlviii, 641.

[16] Crile: Nitrous Oxid Anesthesia, Surg. Gynec. and Obst., August, 1911, p. 170.

[17] Bevan: Choice of the Anesthetic, The Journal A. M. A., Dec. 2, 1911, p. 1821.

[18] Herb: Drugging Before Anesthesia, The Journal A. M. A., May 6, 1911, p. 1317.

[19] Henderson: Heart Failure Under Ether, Surg. Gynec. and Obst., August, 1911, p. 162.

[20] Crile: Anoci Association, The Journal A. M. A., Dec. 2, 1911, p. 1811.

THE PRESENT METHOD OF PHARYNGEAL INSUFFLATION

I have used the method now described in some form for three or four years It was presented to the New Jersey State Pediatric Society in June, 1911[21] It is designed for ether, but I could recommend it for chloroform, did I believe in chloroform by insufflation as I do ardently in ether The apparatus consists of a double rubber bulb maintaining air under a little pressure, which flows, controlled by a cock, through ether in one bottle, then into a second bottle (empty) and thence by tube to the patient's oropharynx or nasopharynx, as may be chosen The bottles hang in a water-bath heated by an incandescent lamp beneath A thermometer is kept in the water After induction is accomplished, preferably with nitrous oxid, anesthesia is *maintained with ether* It accomplishes the following objects (1) the air-pressure being constant (70 mm of mercury is the maximum with hand-bulb), the administration is even and (2) its rapidity is controlled by means of the stop cock, (3) the ether in the first bottle is warmed and the etherized air passing from it is kept warm in the second bottle, which also serves (4) to catch any ether condensed in the tube beyond besides absolutely preventing any being pumped from the first bottle over to the patient (5) a temperature of 98 F is *maintained in the water by the incandescent* lamp the calculation being that the ordinary and convenient 16 candle-power lamp will in the copper vessel replace the loss from the rapid evaporation of ether (but without this lamp attachment simply drawing off some water, by the water-cock and replacing with warm answers as well), (6) *there is flexibility in choice of* three methods of delivery to patient, by metal tube in angle of mouth, or pair of Lumbard s glass tubes in nostrils or pair of rubber catheters graduated introduced to level of the soft palate, (7) operator and administrator are mutually independent in the same field (8) the apparatus is simple, easily kept in perfect order, inexpensive portable usable by any anesthetist anywhere

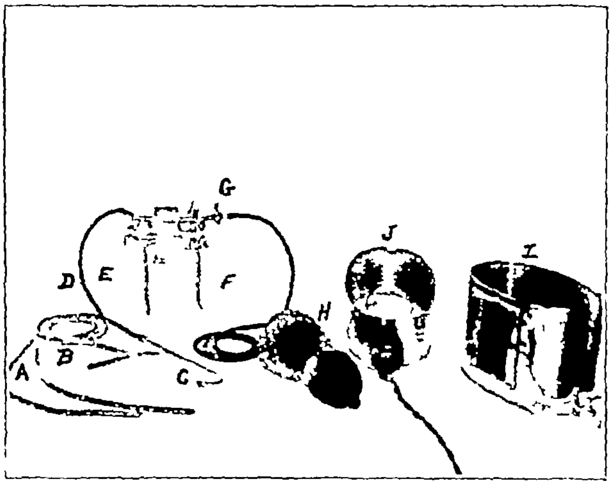

Fig 2—Insufflation apparatus for ether anesthesia (A) two nasal catheters (graduated) or (B) two nasal glass tubes or (C) a metal tube (shaped for angle of mouth) are attached to (D) delivery tube coming from (E) empty bottle connected with (F) ether bottle (graduated in grains also liquid ounces) (G) Cock governing the air pumped from (H) double bulb (J) Water bath in which the bottles are suspended (I) Base (containing incandescent lamp) on which the water bath fits but which in lack of electricity may be dispensed with and the cooling water replaced with warm by hand

I emphasize the value of warming the ether a facility not hitherto appreciated except by very few writers recently, notably Gwathmey[22]

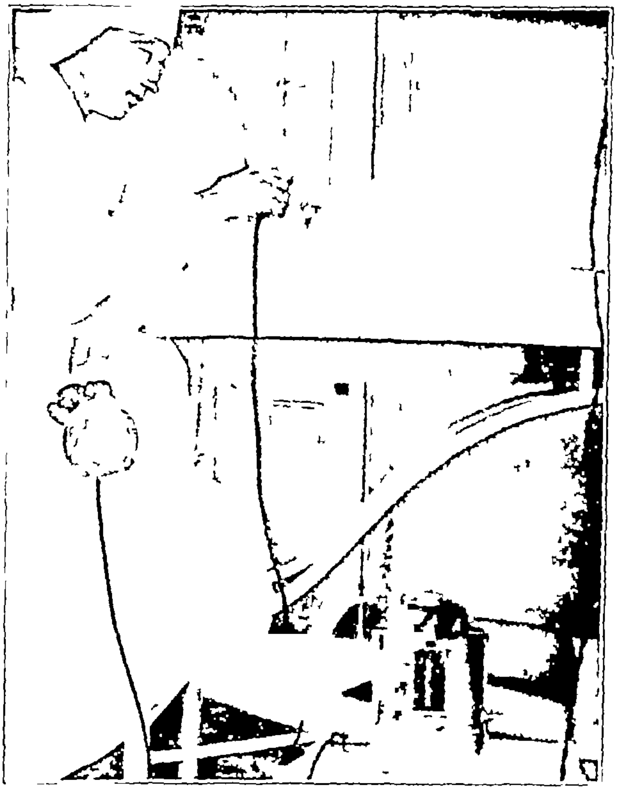

Fig 3 —Ether anesthesia by pharyngeal insufflation Ready for operation The apparatus is entirely out of the way only a metal tube in mouth of the patient being in the field of operation The air pressure is steady Administration is uniform (determined by cock) The ether vapor is warm No liquid ether can reach the patient

Cunningham and Anderson[19] state that with the open method "experiments have demonstrated that in a room at 80 F 2 1 per cent ether vapor reduces the inhalations to 30 F and 5 4 per cent ether vapor reduces them to ° F thus causing a loss of about 21 000 calories of body heat for every ounce of ether used Even this does not fully show the conditions in practice as I have *found by thermometer in the gauze the temperature to* be 0 F during operation Contrast that method with insufflation in which the vapor delivered into the pharynx of the patient is 87 F and may be maintained at 84 F under any rate of flow

INTRATRACHEAL INSUFFLATION

In the discovery of intratracheal insufflation Dr Meltzer[23] with Dr Auer has done the world great service When automatic respiration has ceased to able to substitute, surely and safely, artificial respiration, or when operation necessitates opening the thoracic cavity, to be able to give an anesthetic safely and smoothly in the absence of any automatic breathing, or even excursion of the lung, is a discovery which marks a new era. The courtesy of Drs. Meltzer and Auer in personal demonstrations at the Rockefeller Institute is appreciated and cordially acknowledged. It is thrilling to see an animal with both lungs exposed to atmospheric pressure anesthetized and oxygenated so well that the lungs are pink and full and the skin and mucous membranes looking as in healthy sleep. Especially interesting to our topic is Dr. Meltzer's latest publication,[21] of artificial respiration by pharyngeal insufflation. It could be easily applied with my apparatus *adding a manometer* and provision for substituting instantly oxygen or air in place of anesthetic and thus equip the operator with resources for treating respiratory embarrassment from any cause. This is a preliminary note on some suggested experimental study (Fig. 4).

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[21] Pinneo Anesthesia in the Surgery of Childhood Arch Pediat January 1912 p 18

[22] Gwathmey Method of Anesthesia The Journal A M A Feb 17 1912 p 477

[23] Meltzer Intratracheal Insufflation Med [illegible] March 19 1910

ADVANTAGES

My method, while designed chiefly for throat and head operations to facilitate surgeon and anesthetist working in the same field, maintains an anesthesia so dry, even and controlled, whether shallow or deep, that I have come to use it for all kinds of operations, including the following: tonsils and adenoids, brain tumors (positions supine and prone), cervical adenitis, cancers of tongue and jaw, lymphangioma of tongue, appendicitis, hernia, meningitis (draining the fourth ventricle), prolonged dental operations, hip dislocations, osteomyelitis, club-feet, knock-knees, mastoiditis, pelvic operations, nephrectomy. The warm evenly supplied ether vapor seems to find so easy entrance through the pulmonary alveoli that some of the common embarrassments of other methods, such as wet anesthesia when crowding the ether, are entirely absent (and no new ones occur!) (Fig. 5).

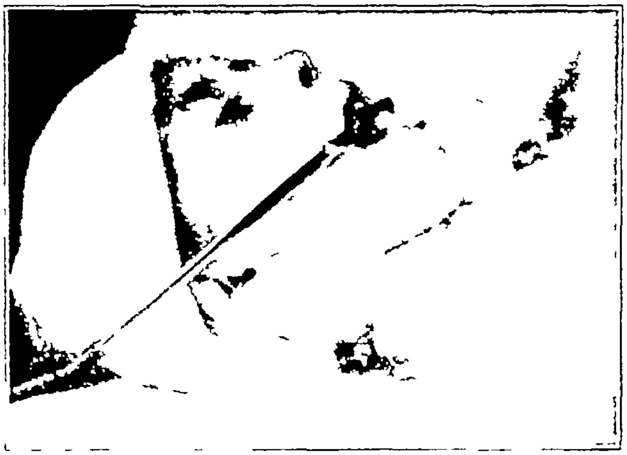

Fig. 4.—The mouth tube in position delivering a steady warm ether vapor. Both anesthetist and operator are independent though in the same field.

A recent discovery was the unexpected ability to anesthetize an alcoholic man to whom ether was like alcohol; increasing the dose by ordinary mask therefore would simply produce a vicious circle of cyanosis and muscular rebellion. He yielded on introduction of the mouth-tube in one or two minutes smoothly with good color and dry throat, and he had had no preliminary hypodermatic of any drug whatever! That the success in such a case may be life-saving against a fatal, prolonged period of ether excitement is shown in the case mentioned by Henderson.[19]

FOUR ESSENTIAL ELEMENTS

In conclusion recognition is urged that the following factors are all of them essential in this method of anesthesia by pharyngeal insufflation: (1) steady air-pressure (whether by hand-bulb or foot-bellows); (2) a cock, fixing, at the anesthetist's discretion, the delivery of vapor to the patient, and maintaining it evenly; (3) a catch-bottle interposed between the ether-container and the delivery tube; (4) a heating system which will maintain evenness of temperature.

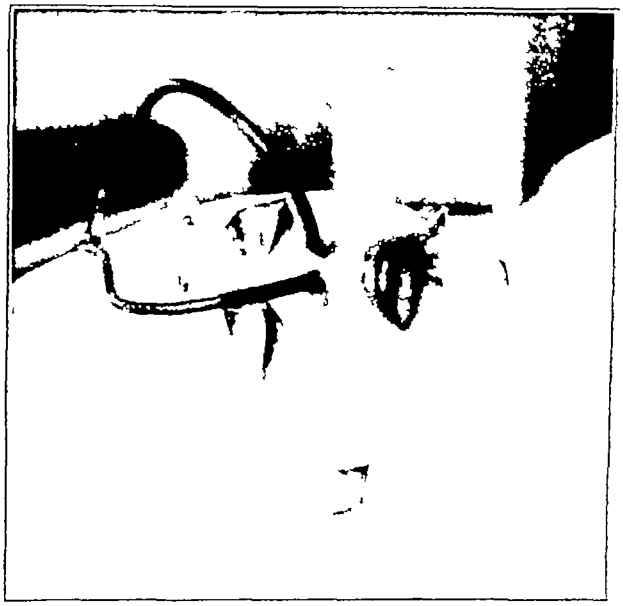

Fig. 5.—The nasal catheters in use. The mouth tube is also shown though usually unnecessary in addition.

Without all of these the method would be fundamentally lacking; with them, even in different form, it would have the essential elements.

199 Garside Street.

ABSTRACT OF DISCUSSION

Dr. James T. Gwathmey, New York: It has been stated that it is impossible to heat ether vapor. I have made a number of elaborate experiments to prove not only that vapor can be heated but also that it can be kept at a uniform temperature as long as required (*New York Med. Jour.*, June 1, 1912). There is nothing in the world that cannot be heated. To say that one cannot heat ether vapor is to violate every law of physics as we know them to-day. Especially is heat desirable in the administration of anesthetics to children, because loss of heat is one reason for shock. You all know how rapidly a child parts with heat under an anesthetic. Every precaution should be taken to avoid this.

Sequence in anesthetization has come to stay. Dr. Woolsey has proved that by having the child inhale the essence of orange by the closed method and following with ether the cyanosis that sometimes accompanies the administration of the "gas-ether" sequence is not produced. With little children especially *I do not believe in the use of chloroform* except in an exceedingly hot climate; even then I do not want to take the responsibility of saying that we should use chloroform throughout with the clinical results of the effects of chloroform before us. Nevertheless, I think that is one of the best methods of introducing the anesthetic to the child. The chloroform

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[21] Meltzer, S. J.: Pharyngeal Insufflation: A Simple Method of Artificial Respiration, The Journal A. M. A., May 11, 1912, p. 1413.

While I would not be misunderstood as claiming that every "surgical child" should be examined by a pediatrist, yet it remains a fact that the proposition is often a twofold one and the attempt of the surgeon to cope with a surgical procedure with which he is entirely familiar in a being with whom he is unfamiliar is often as disastrous as would be the attempt of the pediatrist to undertake a surgical procedure with which he is unfamiliar in a being with whom he is entirely familiar.

There are so many modifications of the purely surgical consideration that are offered by the changing response of children at different periods and particularly modifications which have their genesis in underlying nutritional states, which few but the trained pediatrist can understand and cope with, that it is unfortunate that the operative skill and courage of the surgeon is not more often coupled with the judgment and experience of the pediatrist. Such counsel would give the child and the surgeon their best chances.

A thorough examination is in practically every instance necessary to establish an accurate diagnosis. For the reason that the examination of young children is commonly incomplete, the diagnosis is often inaccurate and not complete enough to insure a full measure of success. This diagnostic inaccuracy is fostered many times by a knowledge that has been acquired through unreliable sources. In a few instances the accurate knowledge is so consciously insufficient that psychologic factors are allowed to enter. Take as a common example, the subject of acute appendicitis in children; its importance is so emphasized and it is so constantly the topic of discussion that it is immediately thought of when abdominal pain occurs in children. And yet abdominal pain is commonly a minor feature of acute appendicitis. Or again, take meningitis: if varied nervous phenomena are present which are not readily understood, meningitis is often diagnosed when it does not exist. My consulting records show that it is rare to find a diagnosis of acute appendicitis or meningitis overlooked in childhood, but on the other hand it is common to find them assigned as the cause of symptoms when they do not actually exist.

Generally stated, an accurate and a complete diagnosis is essential to the institution of adequate treatment, but this is not invariably so. For example, I have observed several instances in which, when viewed from the purely surgical point of view, an accurate diagnosis was practically impossible without exploratory incision or other surgical procedure. And yet there were other factors present which would markedly influence the end results.

If such factors are ignored or reduced to a minor consideration, there is immediately introduced into the problem an uncertainty which does not conserve the morbidity or mortality of postoperative convalescence. To appreciate what the end-results will be in any given case requires very often a close consideration of facts that at first seem to have little or no bearing on the disease or injury, but which will force themselves into the problem just as soon as the depressing effects of any surgical procedure are brought into play.

Not infrequently we are asked, "Can the child stand the operation?" Too often it is dismissed thoughtlessly and the child suffers a serious injustice because a surgical procedure that promises a result in the first instance is delayed until in a later stage it is accompanied by added difficulties and does not restore the child's full efficiency. Such a question should be answered by another: "Can we in this particular case adjust our surgical technic to meet all of the conditions presented by this particular child?" The claim is constantly made that there is a too ready recourse to surgery in childhood, and to some extent this may be true, but it is my opinion, based on several years of observation, that operative timidity and procrastination are often the cause of operative insufficiency, and that our greatest danger in childhood is in good surgery wrongly applied.

The final results of a skilfully executed surgical procedure have not infrequently been compromised or jeopardized by overinterested, underinterested or inadequately warned assistants.

It is assumed that their selection as assistants is proof of their ability, but irrespective of this, all three classes influence the final outcome of a surgical procedure in childhood in exactly the same way, but from different motives. The overinterested assistant is more alive to the technic of the operator than he is to the best interests of the child; the underinterested assistant looks on the procedure as just so much necessary work to be done and is not in full harmony with the operator's scientific interest; the inadequately warned but trained assistant simply does not know. Each in his own way influences the end-result, contributing not so much to the mortality as to the morbidity, because each contributes more or less to the production of shock.

Now what factors in the production of shock does the assistant have more or less under his control?

They are mainly two: hemorrhage and injury. It must be recognized that whether the blood-pressure is directly reduced or not, the mere loss of blood is sufficient in itself to cause shock in children and the degree is influenced by the rapidity of that loss. It is not sufficient, therefore, simply to prevent the loss of blood, but the assistant must be zealous in immediate attention to all bleeding surfaces and, whenever practical, a vessel should be secured before its division.

Injury that conduces to shock in childhood is not only that made necessary by the operation, but in many instances, is the result of pulling or dragging on the tissues and particularly on those tissues which are directly connected with some organ. It is as commonly the unnecessary injury done by the assistant as the necessary injury by the operator that adds to the degree of shock in young children.

In far too many instances it has been the policy to designate the least experienced intern as the anesthetist and, without going into a discussion of the matter, it is sufficient to state that such a procedure is unwise and in no way conserves the best interests of the patient or the operator and is a most certain way of adding to postoperative morbidity and mortality and of prolonging convalescence.

Too often the role of the anesthetist has been assumed as being necessary but unimportant. And the anesthetist himself has largely contributed to this general opinion by assuming the position of a necessary adjunct to a surgical procedure rather than realizing and making others realize that he is actually and largely a direct contributor to the success or failure of the procedure. Too often he asks, "What anesthetic shall we use?" Too often he without protest obeys the command to "push the anesthetic." Too often he accepts the relationship of an inferior when he should be an equal. Who is better able to decide what anesthetic to use and when to push it or withhold it, the trained anesthetist or the surgeon? Surgeons should be more acute generally in realizing that the anesthetist is either a constant danger during a surgical procedure, a necessary adjunct who requires constant watching and suggestion, or is a most valued co-worker according to the thoroughness of his training and experience. And, if in the latter class, it is the operator's duty outwardly to recognize within and without the operating-room the true value of his service and surround his position with the dignity and esteem which it rightly deserves. The danger of an anesthetic in young children is not so much from the asphyxial element as from the toxic, and therefore the preservation of normal functioning should be left to the anesthetist rather than to the operator.

In the postoperative care of children it must be remembered that manifestations of discomfort are not so insistent as in adults, and that children do not often complain, so that in such matters as the detection of postoperative hemorrhages, thirst and pain, there is a necessity for more skilled and careful watching than is essential in adult life. Irrespective of the kind of anesthetic or the length of its administration, thirst becomes a prominent factor and definite instructions should be left for its relief. The same is true of pain, there are many instances in which its occurrence can be predicted with certainty and it then becomes a duty to anticipate it by the use of some means to minimize its intensity.

But most often the efficient management of postoperative convalescence begins before the operation. There are three large classes of children that come to the surgeon for elective surgery: first, those with a surgical condition which interferes with the general health; second, those with a surgical condition which has little or no effect on the constitutional condition, who might be considered normal if it was not for the surgical condition, and lastly, those who, irrespective of their surgical condition or its influence on their general health, exhibit unmistakable evidences of nutritional faults which, while possibly not much exaggerated by their disease or injury, will become important factors when surgical intervention is contemplated.

In the first class, the relief of the disease or injury is all that is required because the surgical procedure is not interwoven with any problems dealing with constitutional depression independent of it. The restoration of the patients to normal efficiency is a question of surgical relief plus ordinary hygienic care and diet.

There is a similar proposition in regard to the second class also, because the surgical condition is largely or wholly responsible for any constitutional symptoms. We ought not to be satisfied, however, with the mere restoration of a balance which follows the elimination of the surgical cause, but should go beyond this and restore normal rather than relative efficiency.

The third class needs more attention before and after than during the operation. Here then, is the opportunity for the most skilled assistance and counsel obtainable, so that the mortality may be reduced, the morbidity lessened and postoperative convalescence shortened and made more certain and comfortable.

While the general attitude of the public toward surgical procedures in children is not what it should be there are several definite factors which have led to its unconscious formation. Inaccurate diagnoses are more common in children than in adults and incomplete diagnosis is the rule rather than the exception, both being brought about largely by the lack of intimate knowledge of children in general and the manner in which they react to injury or disease.

An inaccurate or incomplete diagnosis often, although not invariably, leads to inadequate treatment and, as a consequence, the child suffers either from too much or from too little surgery. Inadequate preparation of the particular patient and his surroundings is commonly evidenced by the inefficient examination and observation which precedes the operation; there is often inadequate operative care because no special attention is paid to planning for rapid work, a brief and skilfully administered anesthetic, the most efficient assistants and the maintenance of body heat. And it is a far too common fact that an unpleasant postoperative convalescence is commonly the end of an otherwise perfect procedure because the child has not been understood and safeguarded at every point. Postoperative complications are not always directly due to the surgical procedure; a prolonged postoperative convalescence is rarely a surgical proposition and the surgeon is not always capable of handling the whole proposition because at one period there existed a definite surgical problem.

If there is to be a restoration of public confidence which will give the surgeon his due, it must come through a correction of the inattention to those things which surround and bear on the operation itself and a closer relationship between the surgeon, the family practitioner and the pediatrist. Operative procedure is not sufficient; the little one must be returned to its parents not alone surgically relieved but equipped for efficient childhood.

42 Gates Avenue.

ABSTRACT OF DISCUSSION

Dr. Frank C. Neff, Kansas City, Mo.: Sometimes it is the custom for a nose and throat surgeon to operate on a child without the immediate knowledge of the physician who has often observed that child. I have had two instances in which such work was responsible for a grave condition which might have been prevented had the surgeon first obtained an accurate history of the child's previous condition. The first child had been a victim of periodic vomiting, and if I had known the child was to be operated on I think certain suggestions regarding the anesthetic and subsequent care of the patient with regard to washing out the stomach, etc., would have been of some value. It seems that in this case the child vomited for three days following the administration of the anesthetic, which was administered by a capable man.

In the second case, the child had been to some extent a bleeder and had quite a profuse hemorrhage after the removal of the tonsils. It is not probable that the previous history of hemorrhage would have been disregarded had the child's regular physician been consulted.

Dr. Frank W. Pinneo, Newark, N. J.: Children are the most helpless patients and although we have learned to view their feeding and medication from a pediatric standpoint their surgery has not yet reached this state. Chloroform is so dangerous because it is given to a small child in an indeterminate dose for an indefinite period that surgeons are giving up its use. Does the anesthetist think, for instance, of the result of the excitement produced by the anesthetic on the child as one of the causes of sudden death? Does he know that death may follow after a considerable number of minutes and yet be the result of the anesthetic? Does he realize also that the renewal of an anesthetic after a few hours is fraught with danger of sudden death, especially in children? How often do we hear it said by excellent and responsible men who work with children, "This is but a slight operation; we will just give him a whiff of ether." A child is more subject to shock and narcotic than an adult. Because a child is easily anesthetized should we "smother" him with an anesthetic that he will remember all [illegible] with terror of surgery and surgeons? In this [illegible]
conditions that a child may have [illegible]
surgery that he should never [illegible]
Better to postpone operation th[illegible]

terror Long operations are very bad So also is rough handling of tissues necessary through haste Standing between the two we may have to choose Bloodgood emphasizes the importance of short anesthesia but he also recognizes the shock of rough surgery and says that he would rather prolong the anesthetic and handle the tissues carefully and gently, especially in children

Dr Kerr suggests a number of excellent diagnostic points on appendicitis and meningitis Osler says that there is 'no symptom of meningitis present in a child which may not be present when there is no inflammation of the meninges at all" Lumbar puncture, therefore is indicated, if not needed, for diagnosis And how important and sometimes difficult, is the differential diagnosis of appendicitis and functional intestinal toxemias?

Dr H J Gramling, Milwaukee Wis A number of cases have been reported in which death was probably not due to the anesthetic but to the persistence of the thymus gland

MODIFICATION OF THE FERGUSON OPEN-DROP METHOD ETHER-INHALER, AND MODE OF ETHERIZATION

C E PRUDDEN, M.D
DULUTH, MINN

After extended hospital use of the ether-inhaler devised by Robert H Ferguson, M D, of East Orange, N J, for the maintaining of surgical anesthesia by the open drop method, and having become thoroughly impressed with the advantages of its use I employed the principle of construction in a modification which I believe has several advantages over the original

Using the principle of the Ferguson inhaler as a working base I have added to it the simple and well-known celluloid gas chamber and rubber mouthpiece of the ordinary nitrous oxid gas-inhaler

The apparatus is not so complicated as one would suppose on first inspection It consists of a double copper-wire frame The inner frame (A Fig 1) is a convex frame of four wires fastened to the base wire, the outer frame (*B* Fig 1) is of a heavy wire ring supported by four wire legs This is attached to the celluloid face piece (*C* Fig 1) Over the inner frame (A Fig 1) are stretched several thicknesses of surgical gauze which is held in place by a wire loop (*D*, Fig 1) that slips tightly over the gauze

The wire frame with the gauze is then covered with a hood of oiled silk having a draw string at top and bottom The bottom string when drawn tight and tied around the base wire will keep out all air from below the top string is drawn up until only an opening of about an inch in diameter remains Through this opening the ether is dropped (*not poured*) on the inner gauze hood which is made of eight or ten layers of gauze

The rubber mouthpiece (*F*, Fig 2) is then slipped over the celluloid frame and inflated by blowing into the valve and then tightening the valve to hold the air which acts as a seal and face-cushion (Fig 3)

Should it be desired to have the patient in the lateral position instead of the supine a hood with an opening in the side instead of at the top may be used

When assembled for use the inhaler consists of two chambers (A and *B* Fig 2) and when ether is dropped through *C* in the hood *D* it falls on the gauze *E* supported by the wire frame and volatilizes thereby saturating the air in the chamber A

Air saturated with ether is of a higher specific gravity than pure air and is drawn and falls through the gauze into chamber *B*, where it is inhaled as a vapor by the patient

The rubber mouthpiece fits tightly over the mouth and nose and conforms to the contour of the face and allows no air to enter from below into chamber *B* This advantage of fitting tightly to the face does away with the greatest disadvantage from the use of the Ferguson inhaler namely, the use of towels either wet or dry which are commonly used around the base of the Ferguson inhaler to exclude the air from below It will also be found unnecessary to place a towel or covering over the patient s eyes to guard against any ether which might run into them

The placing of a covering over the patient's eyes will often at the onset of anesthesia produce a sense of fear in patients by excluding their vision for they feel that something is about to be done which they should not see, something mysterious, and they at once lose confidence in the anesthetist, which above all should be guarded against, especially in children and hysterical women Omission to cover the patient's eyes also has the advantage of not obstructing the movements of the anesthetist, by relieving him of the necessity of having continually to remove a towel to expose the eyes in watching the pupils for contraction and expansion

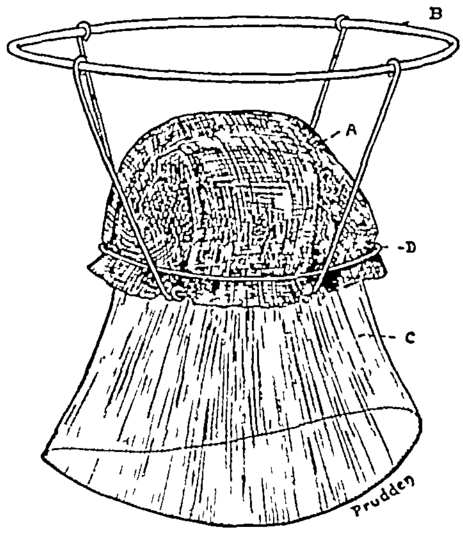

Fig 1 —Frame of inhaler showing wire construction and gauze pad in place

MODE OF ETHERIZATION

The inhaler is held in place over the face by the left hand the third and fourth fingers holding up the jaw, the right hand is free to drop the ether at the rate of three or four drops a second Through the transparent celluloid frame of the lower chamber (*B*, Fig 2) can be noted the condition of the mouth, the color of the lips can be watched and the presence of saliva and mucus can be observed quickly and the inhaler hastily removed to clear the mouth and nose of foreign matter

The patient is first shown the inhaler and is told that placing it on the face will in no way interfere with his respiration, he is also *told that the first few inhalations* will be unpleasant and that at one stage of the anesthesia there will be a slight choking sensation which will pass away with a few deep inspirations he is told to breathe naturally and not to resist the anesthetist, but to allow himself to be overcome by the ether

The anesthetist then has the patient's confidence which is so much desired for a successful anesthesia, the patient understands that the responsibility of getting rid speedily of any unpleasantness rests with him and he will cooperate by breathing deeply, which will in great part do away with the initial persistent fixation of the chest so annoying to the anesthetist

The inhaler is then gently placed over the mouth and nose, a few inhalations are allowed to demonstrate that breathing will in no way be interfered with and then the ether is slowly dropped on the gauze through the opening, gradually at first so as not to frighten the patient, and also to produce an analgesic effect on the mucous membrane of the posterior nares, pharynx and larynx, so that it becomes tolerant to the ether vapor The ether is then increased in rapidity of drops to the second, surgical anesthesia will be produced in from four to nine minutes, generally without any manifestations of the so-called second stage or stage of excitement Should the chest become rigid and the breathing cease for a short period the anesthetist should not be alarmed and remove the inhaler, as this stage will soon pass if the lower jaw is forced forward of the upper and the ether is increased The anesthetist may maintain surgical anesthesia for hours by controlling the number of drops of ether and watching the general condition of the patient, the lips, pupils and pulse, the latter by means of the little finger of the left hand placed on the facial artery where it crosses the inferior maxilla this being done while holding the jaw, or by discontinuing the anesthetic a few seconds and taking the pulse by the index-finger of the right hand on the temporal artery just anterior to the ear

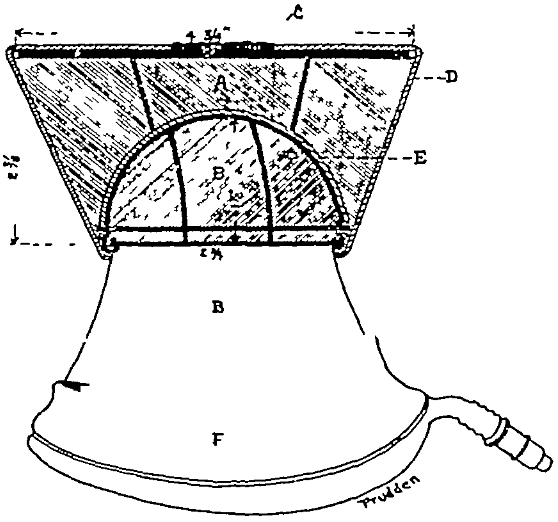

Fig 2—Sectional view of inhaler

Better results will be produced by continually dropping the ether and gauging the amount than by rapidly dropping the ether from time to time with long intermissions

Rarely, if ever will nausea and vomiting follow the use of this inhaler with the anesthetic given as directed, and the recovery is speedy

After the anesthetic the oiled silk hood and gauze pad are removed and the whole frame dipped into some antiseptic solution, dried and a new gauze pad and hood added, when the inhaler is ready for another anesthetic

Whether or not the much-disputed statement is true that ether vapor given by the open drop method chills the patient's lungs I have yet to see a case of postoperative pneumonia or bronchitis follow as the direct result of the anesthetic given by this method and with this inhaler

ADVANTAGES FROM USE OF THE INHALER

I have kept a thorough record of 300 anesthesias consisting of the general run of hospital patients those prepared for operation and emergency accident cases both sexes and all ages mostly adults and including neurasthenics, alcoholics and cases of bronchitis In speaking of prepared patients I refer to those who had had a clearing of the bowel, no food before anesthesia and were given 1/150 grain atropin and one-fourth grain morphin (dosage subject to discretion) hypodermically half an hour preceding the anesthetic The latter procedure tends to produce a quieting effect on the sensorium, reduces pharyngeal secretions accentuates respiration and tends to facilitate the giving of ether in the first stage of anesthesia

I have not had the most remarkable results obtained and reported by some clinicians but the following statistics are conservative and based on actual experience in the surgical clinics and have been very gratifying to me

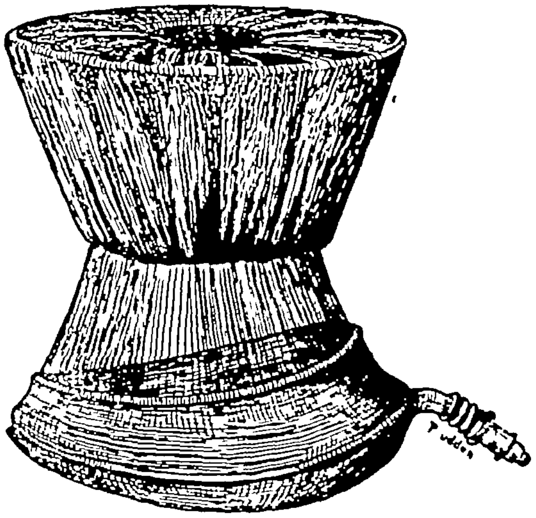

Fig 3—Ether inhaler complete

1 The average time consumed from the time that the anesthetic is begun to the stage of complete surgical anesthesia is six and one third minutes

2 The average amount of ether required to induce surgical anesthesia is 2 ounces

3 The average amount of ether required to keep the patient in surgical anesthesia is 6 4/5 ounces

These figures vary greatly according to the patient it takes from four and one half to nine minutes and from one-half to 2½ ounces of ether to induce surgical anesthesia It will be found that as the length of time of the anesthesia increases, the amount of ether used will decrease and so a short anesthesia of a few minutes may require more ether than the whole second hour of a continued and long anesthesia

The air cells of the lungs become so saturated with the ether vapor during a lengthy anesthesia that it will require very little to maintain an even stage of relaxation and not a too profound narcosis I have repeatedly observed anesthesias with the use of other inhalers in which it required from twenty to thirty minutes to secure sufficient relaxation in the patient to allow the surgeon to proceed the patient would [illegible] cyanotic, breathing would cease the [illegible] have to be discontinued until the prolapsed tongue was brought out of the throat, and artificial respiration would be resorted to and recourse made to the too convenient hypodermic. Generally in these cases the anesthetist has flooded the inhaler with ether and used from 12 to 18 ounces of ether an hour. Of course these cases are rare now, owing to the more intelligent training of anesthetists and to the employment of the open-drop method inhaler.

This inhaler can be made easily with the aid of a pair of pliers and some copper wire and by following the accompanying illustrations. The celluloid lower chamber (*C*, Fig. 1) and the rubber mouthpiece (*F*, Fig. 2) can be procured from any surgical supply house and the oiled silk hoods can be quickly sewed together on a machine.

A summary of its advantages follows:

1. There is absolute freedom from any face covering except the rubber mouthpiece, affording the anesthetist a constant and unobstructed view of the patient's face and condition of the pupils and relieving the patient of fright which would follow the use of a face covering of towels excluding his vision.
2. The inhaler fits snugly to the contour of the face, thus eliminating all air from around mouthpiece.
3. Through the transparent celluloid face-piece, saliva, mucus and the color of the lips can be noticed.
4. Absolute safety is secured owing to the reduced amount of ether required.
5. The administration of ether is simple.
6. The stage of excitement is reduced to a minimum.
7. Surgical anesthesia is produced rapidly.
8. Postoperative vomiting and nausea are infrequent as a direct result of the ether.
9. The same inhaler fits both children and adults, and is adapted to both the dorsal and the lateral positions.
10. Ether may be administered with this inhaler in cases such as alcoholism and bronchitis in which ether is contraindicated when given otherwise than by the open drop method.

NITROUS OXID-OXYGEN ANESTHESIA WITH REPORT OF A FATAL CASE

MOSES SALZER, M.D.
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CINCINNATI

So much has been written of late concerning the safety of nitrous oxid-oxygen anesthesia that it seems to me a note of warning ought to be sounded as to the dangers and difficulties of administration so that an anesthetic agent as valuable as nitrous oxid should not fall into disrepute. Despite the assertions of the nitrous oxid manufacturers and the exploiters of the machines, nitrous oxid-oxygen is not the safest anesthetic in the generally accepted sense of the word. Outside of dental work or momentary anesthesias it is not nearly so safe in the hands of the inexperienced as is ether. The margin of safety between surgical anesthesia and death is much larger in ether than in a gas-oxygen anesthesia, and I therefore believe that if nitrous oxid were used as extensively by the inexperienced as is ether the [illegible] operative mortality would be higher.

I [illegible] add here to the reported cases another death [illegible] nitrous oxid. The anesthetic was being administered [illegible] during my absence from the city by my intern [illegible] possibly seventy-five or eighty other anesthesias and had had little or no experience with nitrous oxid.

The patient was a woman aged 40 who had had repeated attacks of gall-stone colic associated with jaundice. At the time of the operation apart from a slight icterus she was apparently in excellent health. Examination of the chest and urine showed nothing abnormal. Morphin, one quarter grain, and atropine 1/100 grain had been given hypodermatically one hour before the beginning of the operation. The operation itself was a very simple one and had proceeded to the stage of sewing the opened gall-bladder to the peritoneum, the stones having been removed. At this time, which was between twenty and twenty-five minutes after the anesthetic had been started, death came suddenly with an intense cyanosis. There had been some cyanosis during the operation. The respirations and pulse stopped almost immediately and there was absolutely no return of either, despite the fact that massage of the heart through the diaphragm and *artificial respiration* were kept up for several hours. Cyanosis either continuous or intermittent is always a sign of danger and how much, if any, cyanosis can be permitted in any given case can be determined only by the experienced anesthetist.

A perusal of the literature will show that most of the reported deaths due to this anesthetic occurred either in the hands of the wholly inexperienced or of those just learning the administration of nitrous oxid [illegible] not wish to go on record as being opposed to [illegible] of nitrous oxid-oxygen anesthesia, as I personally [illegible] it the preference in all my anesthetic work [illegible] believe that it ought to be used whenever possible [illegible] not by the occasional anesthetizer. The numb[illegible] factors which come into play in the administratio[illegible] this anesthetic are greater than in any other anesth[illegible] and as the margin between surgical anesthesia [illegible] asphyxia is so narrow as compared with the margin of safety in ether this is essentially the anest[illegible]ic for the expert. But the fact that the anest[illegible]ires [illegible] skill in its administration is no more excuse [illegible] using it than that a life-saving operation shou[illegible]fuse[illegible] a patient because it requires skill in its p[illegible]

Let us consider those factors which [illegible] the difficult administration of this anesthetic [illegible]st place nitrous oxid-oxygen anesthesia is a fixed [illegible], as the vast majority of cases require a preliminary injection of morphin in order that a smooth anesthesia with muscular relaxation may be obtained. When morphin is not given and in a certain percentage of cases when it is administered ether is necessary for muscular relaxation and still further complicates the anesthesia. Morphin outside of its narcotic effect which is of value, exerts an even more important influence on the respiratory center in that it increases the tolerance to carbon dioxid and thus allows of the administration of a mixture richer in gas than would otherwise be the case. A slight increase in the arterial carbon dioxid content is a much more potent cause of hyperpnea and a resulting overanesthetization than is a comparatively large diminution of oxygen. Haldane and Priestly[1] have shown that an increase of 0.2 per cent. of carbon dioxid will double the respiratory rate. When nitrous oxid-oxygen is administered without the preliminary morphin injection, the hyperpnea is of serious import and prevents a smooth anesthesia. Nitrous oxid itself is also a respiratory depressant, and this added to the morphin action makes the danger of asphyxiation always a real one. On the other hand, without the use of morphin, the respiratory rate is increased, more nitrous oxid is inhaled and absorbed and there is again the danger of asphyxiation, plus an irregular anesthesia to contend with In either event, the nicest judgment and skill are necessary to conduct a safe and satisfactory anesthesia Nitrous oxid cannot be administered by any automatic machine, neither can any other anesthetic, as neither patient nor operators are automatic

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[1] Haldane and Priestly: Jour. Physiol., 1892, xiii, 419.

Nitrous oxid-oxygen given with ether again complicates the physiologic workings of the anesthetic Nitrous oxid with "just a little ether," or with more than "just a little" *given continuously throughout an operation* should not be considered as a nitrous oxid anesthesia at all, but as an ether anesthesia modified by nitrous oxid

Nitrous oxid-oxygen-ether anesthesia does not present nearly the difficulties in administration as does nitrous oxid-oxygen without the ether Ether is a respiratory stimulant and counteracts the depressing action of both nitrous oxid and morphin It is much more powerful as an anesthetic agent, volume for volume, than is nitrous oxid Therefore those who give "just a little ether," say 1 or 2 per cent, throughout an entire operation (which in some cases may mean 2 or 3 ounces), are able to use possibly 5 or 10 per cent less gas, for which oxygen can be substituted, which is from five to ten times the leeway allowable when ether is not used and when a difference of 1 per cent in the gas or oxygen spells success or

ntain that when ether in any amount is given ously during an operation the anesthesia is essen- n ether anesthesia and the patient is subjected to ingers and disagreeable after-effects of ether ng from the amount of ether some administer with is-oxygen, these gases simply serve to vaporize the , an expensive and unnecessary procedure, as the ul anesthetist can conduct an ether anesthesia even for prolonged operations with from 2 to 4 ounces of *ether without the gas When the ether is given only for* a few minutes early in the anesthesia this is also essentially an ether anesthesia until all ether effects have been eliminated

I do not wish to appear as condemning this combination, as there are cases in which anesthetization is unsatisfactory or impossible without ether, and if anesthesia by the use of an ounce of ether plus the gas and oxygen is satisfactorily maintained I believe that the patient is better off than if he has taken 3 or 4 ounces of ether without the gas and oxygen, but these should not be called nitrous oxid anesthesias To summarize

1 Nitrous oxid-oxygen is not the safest anesthetic for the occasional anesthetist, and should be administered only by the expert

2 The number of physiologic factors involved are greater than with any other anesthetic

3 A preliminary injection of morphin should always be given

4 Ether modifies the anesthetic and makes it easier to administer, but subjects the patient to the dangers and disagreeable after-effects of ether

41 Croton Building

Recent Work in Anesthetics—Although the foundation of most of our knowledge of the action of anesthetics has been laid bare through experiments with chloroform clinically and in the laboratory it now appears that both physiologists and anesthetists are beginning to regard this drug as having yielded to us all it can and are turning their attention elsewhere In America as we have seen ether holds the field to a very large extent although at the moment that field is being encroached on by administration of nitrous oxid and oxygen—J Blumfeld in *Practitioner*, London

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RESUSCITATION FROM DROWNING

CONTINUED PERSISTENCE OF HEART-BEAT DEATH FROM NON-RESUSCITATION OF THE RESPIRATORY CENTERS

FREDERIC WADE HITCHINGS, S B M D
CLEVELAND

The frequent occurrence of drowning-accidents during the summer serves to emphasize the need of a thorough understanding of the principles underlying resuscitation and particularly the fact that success ultimately depends on preventing permanent injury from anemia of the brain There is need of extensive series of figures based on accurate observation of similar accidents which will show the important part the time element bears in such cases In the following case, while resuscitation was not accomplished, the facts seem to be worth recording because the heart continued to beat for so long a time while artificial respiration was being given

The patient was a strong, well developed man aged 28, who had apparently been seized with cramps while swimming in about 7 feet of water When attempts were made to get him out of the water he struggled so hard that he not only prolonged the efforts but also nearly drowned two of his rescuers In all probability he was submerged between four and five minutes After he was brought ashore the water was pressed out of his lungs at once his tongue was drawn forward and artificial respiration was begun by the Sylvester method

On my arrival, about fifteen minutes after the accident, I found the patient with markedly cyanotic face and no radial pulse I at once gave him a couple of sharp slaps over the heart and turned him over on his face so as to continue the artificial respiration by the Schäfer method Within the next few minutes feeble heart sounds could be heard with the stethoscope and a little later a faint pulsation at the wrist could be obtained. In the meantime Dr J B Austin had been sent for at my request, and from this time on we worked on the patient together, Dr Austin confirming the subsequent findings

At the end of about half an hour after the beginning of artificial respiration the face began to be a little less cyanotic and three slight spontaneous respirations were obtained Oxygen was then given continuously It seemed as if success would ensue but in spite of strychnin, one thirtieth grain and epinephrin 10 minims of a 1 1,000 solution being given intravenously and massaged thoroughly toward the heart it was impossible to bring back spontaneous respiration The heart continued to beat until two hours and ten minutes had elapsed the artificial respiration being given for a total time of two hours and fifteen minutes and the oxygen for the last one and three quarters hours of that time

This case illustrates the well known fact that efforts at resuscitation should be used for at least two hours after apparent death although I do not believe it is of any use to do this for so long a time in case of persistent absence of the heart sounds as shown by careful stethoscopic examination In this regard in another drowning case which I was called to attend a few days previously a 14 year old boy had had cramps and been submerged between five and ten minutes—probably nearer ten minutes than five No heart action could be detected and as I saw him after there had been no evidence of heart action for about twenty five minutes the case at once seemed to be hopeless Resuscitatory measures had been maintained for three quarters of an hour when a drop of ether was placed in one eye (d'Halluin) No reddening was caused confirming the previous findings that there was no circulation If artificial respiration had been continued for an hour longer [illegible] unnecessary effort in the face of [illegible]

The heart may continue to beat for as long a time as five minutes after cessation of respiration, although it usually stops in two or three minutes Add to a *possible* five minutes the seven minutes during which the brain may be completely resuscitated after total cessation of the heart-beat, a *possible* maximum of twelve minutes of relative death may be undergone with recovery If this period of twelve minutes is exceeded "recovery" may take place but without return of consciousness or with destruction of some of the higher centers Moreover if the heart does not pump a sufficient stream during the first five minutes the time is shortened Another dangerous factor tending to shorten this time is the degree of violence with which the water enters the lungs when the accident happens

In case preparations can be made inside of this twelve-minute limit the attempt should be made to inject epinephrin in normal saline solution into a radial artery toward the heart (Crile) In this way the coronary blood-pressure can be raised and the heart made to resume its action Doing this on the field would mean taking chances as regards infection but with a life at stake it would be legitimate to make the effort The hands of the operator and the wrist of the patient could be sterilized with tincture of iodin No anesthetic would be needed nor could it be used if at hand The needle, tube, reservoir and saline solution would have to be in a portable form ready for instant use

In the case reported above, failure to resuscitate was due principally to irreparable damage having been done to the respiratory centers in the medulla by anemia In this case there was no indication for using the saline epinephrin intra-arterial infusion because the heart was resuscitated without doing so The intravenous injection of epinephrin and strychnin must have been dispersed through the circulatory apparatus but epinephrin and strychnin will not cure cerebral anemia — they merely enable the circulatory mechanism to work more efficiently

With the exception of the Brosch-Sylvester method, the Schafer method of giving artificial respiration gives the greatest respiratory exchange per movement of the thorax When in addition to this the facts are considered that the tongue automatically falls forward that there is free drainage from the lungs and that long continued application can easily be made it is undoubtedly the best method to be used in drowning-accidents

10406 Euclid Avenue

The "Drug Action" of Anesthetics—Richard Gill chief chloroformist to St Bartholomew's Hospital maintains that the "drug action" of all anesthetics is similar they are all oxidized in the blood into inert bodies they deprive the red cells of their oxygen The hot nascent oxygen of the red cell readily oxidizes them whereas the diluted oxygen of the air does so only with extreme slowness The red cells at first offer a resistance to this demand for their oxygen The resistance progressively diminishes Less and still less anesthetic is [illegible] during a long operation as the minutes pass and much more anesthetic is needed to break down the first resistance (induction) than is subsequently needed to deoxygenate the red cells already beaten by the anesthetic (maintenance) The oxygen instead of feeding the body tissues is confiscated [illegible] the anesthetic state" is one of oxygen starvation An oxygen-starved brain and nervous system [illegible] cannot function fully hence [illegible] insensibility —J W Dean in *Australasian Med Gaz*

THE ABILITY OF MOTHERS TO NURSE THEIR CHILDREN*

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Perhaps this topic may well be opened by emphasizing the necessity for women to nurse their children particularly as so much misconception exists regarding this not only on the part of the laity but of physicians themselves I have heard expert physicians say that they have little fear of difficulty in feeding an infant artificially if only they can have the charge of it from the beginning I thoroughly agree with the necessity of the early control by the pediatrist in order to avoid the digestive disturbances which so readily arise The difficulty is thereby lessened, but by no means removed I cannot share the optimistic view expressed There may exist the man who can, under these circumstances feed infants as successfully artificially as at the breast but I have yet to meet him Certainly, all statistics indicate the contrary A few of these may be of interest

INFANT MORTALITY AND INFANT DIET

The oft-quoted extensive studies of Eross,[1] based on the vital statistics of thirteen European countries covering a number of years show that the average mortality in the first year of all children born alive is 18 33 per cent The United States Census Reports[2] for 1890 give a very similar figure — 18 29 per cent for the registration area There is considerable variation in different parts of the world According to Eross, the mortality in Ireland is but 9 4 per cent and in Sweden 9 7 per cent in Saxony, on the other hand 28 1 per cent, and in Bavaria 28 7 In Russia according to Gundobin,[3] it is still higher, 32 6 per cent Budin[4] reports a mortality in the first year for France from 1896 to 1900 of 20 2 per cent and the statistics of Luling,[5] for Baudelocque's clinic de Paris give 26 94 per cent dying in the first year of the 13,952 children born

That this mortality is largely dependent on disorders of digestion is a suggestive fact Heimann[6] reports an average from 1897 to 1901 inclusive of 10,993 infants under one year of age dying each year in Berlin over one third of them suffering from digestive disorders In the mortality of Massachusetts from 1892 to 1896 according to S W Abbott[7] diarrheal disorders were responsible for 29 19 per cent of the deaths in the first year of life The six-year record for the United States ending 1890 made diarrhea responsible for 21 22 per cent of the deaths in this period Budin[4] found that 38 5 per cent of the deaths in the first year in the civic population of France were due to gastro-enteritis

This brings us naturally to the next point to be considered the influence of the diet since it is particularly among the artificially fed infants that gastro enteric affections prevail We have reason to expect then, that the mortality will be found much greater in the artificially fed That this is the case is well recognized but a few figures may serve to illustrate to what degree it is true In the cases reported by Luling,[5] 14 24 per cent of the breast-fed infants died and from 31 42 per cent to 50 24 per cent of the bottle-fed, and in the 10 000 infants in the first year studied by Westgaard,[8] of those that were breast-fed 17 per cent died from gastro-intestinal diseases and of the bottle-fed 43 per cent Of 1,000 infants studied by Armstrong,[9] in England, but 8,418 per cent of the breast-fed died in the first year against 22 826 per cent of the bottle-fed In 8,329 deaths under one year of age, occurring in Munich, Frank[10] found that 86 14 per cent of the infants had been bottle-fed Finally, W H Davis[11] *addressed letters of inquiry* to a large number of women giving birth to children in 1910 in Boston The 736 replies showed that only 26 per cent of the deaths between two weeks and one year of age had occurred in breast-fed babies Roughly speaking, we may say that the breast-fed baby has at least five times the chance of living that the bottle-fed baby possesses

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty-Third Annual Session held at *Atlantic City June 1912*

1 Eross Ztschr f Heilk, Prague 1895 xix 271

2 Eleventh Census U S, 1890 Vital Statistics i 22

3 Gundobin Jahrb f Kinderh, 1898 xlviii [illegible]

4 Budin Ann de med et chir inf 1907 vii 181

5 Luling These de Paris 1900 p 18

6 Heimann quoted by Ibert Jahrb f Kinderh 1905 lxi [illegible]

7 Abbott Jour Massachusetts Assn Boards of Health Dec [illegible] 1898

We may then assume it proved, beyond question, that the absence of breast-feeding is perhaps the chief cause of infantile mortality in the first year, as indeed of many deaths occurring in the second year We may even go further than this and claim that the results of bottle-feeding are often much more lasting than this period Thus Rose[12] studied 164,000 persons with relation to the later influence of the diet which had been given in the first year of life, and found that in many respects the deleterious effects of bottle-feeding were often quite discoverable in these individuals, and that even in men capable of military service the difference to the disadvantage of the bottle-fed baby was very apparent This observation is by no means an isolated one, similar conditions having been noted by other writers

BREAST-FEEDING AND THE CONDITIONS AFFECTING IT

With the full understanding of these facts, the importance of the next three topics to which reference must be made is pressed home on us 1 How many mothers nurse their children? 2 How many are capable of nursing? 3 What is the cause of failure of women to nurse their infants?

The condition varies considerably with the country In Japan breast-feeding is the rule In Greenland, artificial feeding is scarcely known and among the Esquimaux of Alaska, there is no cow s milk to be had and infants are often nursed for from two to three years In some of the races of Africa, the mother is often helped, if need be by any of the women of the village, previous parturition recent or at all, not being a necessity the secretion of milk being gradually established in virgins or in grandmothers by the repeated putting of the child to the breast

The importance of nursing by the mother is one long recognized by writers An interesting contribution by Schlossman[13] quotes the urgent advice given in favor of it by the philosopher Favorinus who lived in the time of Trajan Unfortunately however in many so called civilized countries maternal nursing has undoubtedly decreased greatly in frequency since then In parts of Bavaria according to Grassl[14] hardly 30 per cent of the mothers give the children the breast In Berlin as stated by Neumann,[15] 55 2 per cent of the infants were nursed in 1885 and only 31 4 per cent in 1890, showing the great falling off which had occurred in maternal nursing Further statistics could be given

Is this failure of breast-feeding an actual inability or only an apparent one? Is there in reality a diminishing power of women to nurse their infants? This is our second question As a result of studies in the Obstetrical Clinic of Graz, Negris[16] found that there existed in only 10 per cent a physical disability to nurse In the Stuttgart clinic, according to Martin[17] nearly 100 per cent do nurse In Heidelberg Jaschke[18] observed that whereas in 1904, 64 01 per cent of the infants were breast-fed, in 1907, 86 14 per cent and in some months 97 22 per cent were showing a very decided increase in the ability In Wurttemberg, where formerly according to Hegar only 41 per cent of the women in the clinics nursed their babies now according to Martin[17] 100 per cent were capable Madam Dluski[20] estimated that of 500 women observed in Pinard's clinic in Paris there were but five in whom it was certain that nursing would have been impossible either from the beginning of lactation, or after an interval of continuous effort and Blacker[21] as a result of studies on 1,000 children in London, could find only twenty-four, or 2 5 per cent, in whom there was a physical inability to nurse

With regard to the frequency of breast-feeding whether there is an actual diminution or an apparent one only, some of the figures which have been given, are, to a certain degree, open to criticism In the first place many of the statistics are derived from lying-in institutions for patients of the poorer classes only among whom the conditions of life are very different from those which obtain among the well-to do In the second place, such statistics apply only to the first few weeks of *the nursing period during which* the women are under close observation and careful diet and treatment, and we have no means of knowing how many of these women are able to continue nursing say, for *six months* or more, or do so even if able after they return to their homes The important matter to determine is whether there is a diminution in the actual ability of women to continue nursing, or whether the cessation of nursing is a preventable condition Exact figures bearing on this are not very numerous In Leipsic according to Hohlfeld[22] only 27 5 per cent of the mothers continued to nurse for six months Weiss[23] found that in 1 622 cases studied by him there were 77 01 per cent of the infants nursed for one week and only 25 3 per cent fed in this way for over six months Negris[16] found that among the polyclinic clientele of Graz and its vicinity only about one-third of the mothers continued to nurse exclusively for a period averaging two months or more and that this number was diminishing Nordheim[24] reported his experience in 1 000 women coming to the Children s Dispensary in Munich Of these only 3 6 per cent had nursed longer than three months and only 0 8 per cent longer than six months This is truly as Nordheim says a deplorable condition

More encouraging are the interesting figures of Deneke and Thorn[25] who through the aid of midwives-who had been in attendance studied the later history of 2,447 infants born in the Magdeburg district in 1907, outside of maternity institutions. It was found that 8[illegible] 7 per cent. of these were nursed at least for a time, and that in 61 per cent. nursing was continued for longer than two or three months. They conclude from these studies that the great majority of mothers are physically capable of nursing their children. Hegar[26] is of the opinion that under careful management 60 per cent. of mothers outside of maternities are able to nurse their infants. Kriege and Seutermann[27] in 4,096 infants in private practice in Barmen found 77.9 per cent. nursed for from five to six months. Koplik,[28] in 1,007 cases in private practice in New York found less favorable conditions. Only 573 (56 per cent.) of these were breast-fed for different periods and only 40 per cent. of these 573 for longer than four months. Marfan[29] on the other hand, estimated, as evidenced in his own practice, that two-thirds of the women of Paris can nurse satisfactorily and in the other third there is generally a partial power to do so, a certain amount of substitute feeding being required; only 10 per cent. are actually unable.

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[8] Westgaard Die Lehre der Mortalität und Morbidität 1901 quoted by Jaschke Monatschr f Geburtsh u Gynäk 1908 xxviii 172

[9] Armstrong Brit Jour Child Dis March 1904 p 11

[10] Frank quoted by Jacobi Gerhardt s Handbuch der Krankheiten i 310

[11] Davis Boston Med and Surg Jour 1912 clxvi 242

[12] Rose Deutsch Monatschr f Zahnheilk 1907 xxiii 13 quoted by Ziegenspeck Verhandl d Gesellsch f Geburtsh u Gynäk 1907 xii 829

[13] Schlossman Monatsch f Kinderh 1910 Orig ix 201

[14] Grassl Soc Med u Hyg, 1907 i 97

[15] Neumann Deutsch med Wchnschr 1902 xxviii [illegible]

[16] Negris Wien klin Wchnschr [illegible] xviii [illegible]

[17] Martin quoted by Jaschke Monatschr f Geburtsh u Gynäk 1908 xxviii [illegible]

[18] Jaschke Med Klin 1908 iv [illegible]

[20] Dluski Thèse de Paris [illegible]

[21] Blacker Med Chron Manchester [illegible]

[22] Hohlfeld Deutsch [illegible] xxxi [illegible]

[23] Weiss Med Klin [illegible]

[24] Nordheim Arch [illegible]

[25] Deneke and Th[illegible]

The question then of the falling off of maternal feeding can be determined only partially on account of the variation in published statistics. Undoubtedly many more women cannot nurse than should be the case among supposedly normal individuals. Undoubtedly, on the other hand, many women do not nurse who are capable of doing so under proper care.

The relative inability among the poor and the well-to-do is also a matter of interest. The general opinion appears to be that in the better classes the inability to nurse, or at least the infrequency of nursing, is seen more markedly than among the poorer classes. There exists certainly among the upper classes a large number of women who do not and often, in spite of their most earnest wishes, cannot nurse their infants. Contrary to the common opinion is, however, that of Neumann,[30] who thinks that the falling off in the capability of maternal nursing in Berlin women is seen oftener in the working classes. From the years 1900 to 1905 there occurred in that city an increase in breast feeding among the well to do. The small percentage of Vienna infants nursed over six months as reported by Weiss[2[illegible]] came too from the dispensary class of patients.

Some of the statistics of maternities quoted are at least a clear indication of the general change which it is to be hoped is taking place. The clearly increasing number of women in some of these institutions who now nurse their children as compared with the conditions a few years earlier indicates that a similar increase of frequency of nursing is to be looked for in patients outside of the institutions. Certainly everywhere among the more intelligent classes and even among the poorer under the influence of the awakened conscience of physicians and the instruction which mothers receive from varied sources there is a growing earnest desire of women to nurse their children and, it would seem, an increasing frequency of maternal nursing.

This brings us to our last question: What is the cause of the diminution of breast feeding which has shown itself in many regions? Bunge[31] believes that there is an increasing actual physical inability of the mother to carry on maternal feeding, which he attributes largely to the continued use of alcohol by civilized races. Whatever the cause, there is good reason to believe that there is a physical disability to a certain extent and that this disability may be transmitted by inheritance. Most investigators, however, think that the causes of failure to nurse are to be sought rather in the unwillingness of the mother, instigated or abetted often by the advice of midwives and monthly nurses and, I regret to say, far too frequently by physicians to make a fair effort. Hegar[26] expresses this clearly in attributing the inability to nurse to the influence of generations of undervaluing of maternal feeding. The introduction of the numerous methods of artificial feeding led easily to the conviction that nursing at the breast was an unnecessary and onerous affair. Ziegenspeck[32] points out that in Germany, where the preparation of artificial foods and food mixtures has long thriven, dating, as we know, at least from the time of Metlinger (1474 A. D.), maternal nursing has suffered proportionately.

I have, in a previous article,[33] referred to an interesting contribution by Keller[34] which is so illustrative of the curious reasons assigned that I give it now more in detail. Although the observations were made on women of the poorer classes the reasons in many respects are very similar to those commonly given by women in better circumstances. Keller studied the histories of 1,300 children in the Kaiser Franz-Joseph's Ambulatorium in Vienna and found that 278 or 21.4 per cent., had never been nursed at all. In eighty-two of the 278 cases the failure to nurse was on the mothers' own initiative, not through the suggestion of others. The reasons given were: "felt weak," fifteen cases; "felt ill," nineteen; "too young," one; "too little milk," but without any attempt, fifteen; "child would not take the breast," but without trial, six; "no milk," but without attempt, seven; "took bottle readily," six; "menses occurred," one; "had a severe labor," three; "pain in the breast," but child never put to the nipple, seven; "husband unwilling," two. In nineteen cases it was through the advice of the attending physician that the mother did not attempt nursing, and on the following grounds: "sick" or "weak," ten; "menses had occurred with previous child," one; "too little milk," but without trial, two; "no milk," but without trial, six. In seventy-nine cases the advice of the midwife was followed, the reasons urged being: "sick" or "weak," twenty; "too old," one; "no breast," three; "would not take the breast," but no trial made, five; "too little milk," but no trial made, twenty-nine; "no milk," but no trial made, twenty; "tender breast," one. In ninety-four of the remaining ninety-eight cases the reason for not nursing was the necessity of going immediately to work. In only 0.8 per cent. of the cases was it perfectly certain that the mother could not have nursed. Very similar results have been previously published by others, among them Nordheim[24] who found that of 1,000 women 61.2 had never nursed at all, and 86.7 per cent. of these entirely without good reason.

Among the working classes, undoubtedly, poverty is a frequent cause of the desire to avoid nursing. It is often imperative for the mother to work, and she cannot well do this and attend to the infant also. In other cases lack of suitable nourishment for the mother causes a failure in the secretion of milk. The remedies for the c difficulties are to be found only in sociologic aid. In other cases it is the complete ignorance of the mother regarding the importance of breast feeding which leads to gross indifference in the matter, and this applies to all classes of society. Only constant instruction of the people can remedy this. The splendid work of the Consultations de Nourissons, founded in Paris by Budin, and established in other cities of France, has by this instruction increased the number of cases of maternal feeding among the poor by 20 or 30 per cent. Similar efforts in Meran and Stuttgart to care for the better nutrition of the mothers have, according to Ziegenspect,[32] increased their ability to nurse their children. In the upper classes there is undoubtedly often seen an inability to nurse dependent on the more highly organized and hence more easily disturbed nervous organization of the mother. Here, too, is the influence of early mental forcing, early enjoyment of social life, with late hours, and the like. With all classes the failure of intelligent management of the early nursing periods by physicians or midwives has often been sufficient reason for an early cessation of the milk secretion. Faulty methods of dressing have doubtless in the past been the cause of many hopelessly depressed nipples.

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[26] H[illegible] [illegible] Gyn[illegible], 1910, xv, 201.

[27] Kriege [illegible] Seutermann: Zentralbl. f. allg. Gesundheitspflege, 1906, xxv, No. 1 [illegible] Zeitschr. f. Säuglingsfürsorge, 1911, v, 11.

[28] Koplik: The Journal A. M. A., Jan. 1[illegible], 1[illegible], p. [illegible]

[29] M[illegible] [illegible] xx, 1.

[30] N[illegible] [illegible] 1910 [illegible]

[31] B[illegible] [illegible] Med. [illegible]

[32] Ziegenspeck: Verhandl. d. Gesellsch. f. Geburtsh. u. Gynäk., 1907, xii, 5[illegible]

[33] Griffith: New York Med. Jour., [illegible] 4, 1[illegible]

[34] Keller: Wien. klin. Wchnschr., 1[illegible] xxii, 435.

The numerous stated contra-indications to nursing are more fancied than real. Actual contra-indications are few, and physicians should learn to appreciate this fact. Here, especially, the obstetrician who is thoroughly grounded in the importance of breast feeding can be of the greatest aid, since he is so early associated with the mother and can exert a great influence on her. Certainly many obstetricians in the past have paid all needed attention to the mother, but far too little to the infant. This is a reproach often made, but one which I hope is passing away. There is there can be no good substitute for mother's milk and this the obstetrician should impress on the mother with all his power.

Finally, in this connection, it must never be forgotten that inability to nurse or inability on the part of the infant to digest its mother's milk can never be determined by a brief trial. It is only after prolonged and repeated, and again repeated, efforts that we can reasonably conclude that weaning is necessary. Here the fault lies with physicians, since they are, as a rule, far too ready to abandon their efforts. The mother is perhaps clamorous for weaning and it is easy to move in the path of least resistance. Many a time the breast, which at first gives insufficient milk, will later render an abundant supply, and the infant's digestion at first much disturbed, will accustom itself perfectly after a while.

In conclusion, I think it may be claimed (1) that the mother's ability to nurse her infant, although lessened in the past, is no longer materially diminishing provided the woman has been raised and continues under healthy, normal conditions, (2) that these conditions are improving in the upper classes and not changing for the worse in the poorer and (3) that the infrequency of nursing depends chiefly on the ignorance of the laity and the indifference of physicians. It is our duty as physicians to remedy these evils.

1810 Spruce Street.

Metal Poisons.—While it is true that most of the workers in the poisonous metals are warned of their danger, my experience with them is that each man usually thinks he will prove an exception to the rule and like the coal miner long accustomed to deal with fire-damp finally forgets the danger and courts disaster.—Thompson in *Jour. Maine Med. Assn.*

SUPPLEMENTAL BREAST-FEEDING IN INFANTS *

H. M. McCLANAHAN, M.D.
OMAHA

Vital statistics have abundantly demonstrated the following facts:

1. Mortality is greater during the first year than at any other time of life, and higher during the first three months of life than during any other period.

2. Mortality and morbidity are higher among bottle-fed than among breast-fed infants. This is the testimony of writers on diseases in children. As there is no evidence that breast-fed infants receive better care than those reared on the bottle, it is evident that the only reason for the greater mortality in bottle-fed infants is due to the nature of the food. The reasons for the difference in mortality may be briefly summarized as follows:

A. The milk of the mother is adapted by nature to the peculiar needs of the human infant just as the milk of other mammals is peculiarly adapted to their offspring.

B. It contains all of the elements necessary to the growth of the various organs and tissues of the infant's body. In the order of nature, the milk of other mammals is not adapted to the digestion of the human infant.

C. Breast-milk is received by the infant in its natural state unchanged by cooling or agitation or the separating of its constituent elements.

D. It is a vital fluid, as it enters the stomach, stimulates the digestive secretions and is assimilated with less waste and induces less exhaustion of the vitality of the infant than any prepared food. Hence there is less expenditure of vital energy in the digestion of mother's milk.

E. Under normal conditions it is a sterile fluid and is carried to the infant's stomach in a sterile condition.

F. It is ingested at an even temperature, namely that of the body, and is at once ready for the action of the digestive ferments.

G. It contains certain protective principles that confer an immunity to the infant, and greatly lessens infant morbidity.

REASONS FOR INCREASE IN BOTTLE FEEDING

While the above facts are common knowledge among students of medicine, they are not duly appreciated either by physicians or by the laity. There is an increasing number of infants being reared on the bottle. It is believed and no doubt correctly that the chief reasons for this increase in bottle fed infants are:

The influence of manufacturers of infants' foods. We must admire the systematic method employed in exploiting the merits of the various foods and we cannot believe that extensive and expensive advertising would be continued even to the mailing to expectant mothers of handsomely illustrated booklets containing specific directions for preparing the food if it were not a paying business.

Improved methods of infant feeding. During the past twenty years there has been an immense volume of current literature on feeding not only in medical journals but also in popular publications and both the medical profession and public have come to believe breast feeding neither essential nor important to the welfare of the infant. On the contrary breast feeding has received scant attention, indeed no other physiologic function of the human body has received so little study as breast-feeding Granting that immense progress has been made in artificial feeding it yet remains true that the best artificial feeding will not equal breast-feeding

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

My limited study of this subject leads me to the conclusion that among both the medical profession and the laity, the belief exists that a mother either can or cannot nurse her infant As Southworth has said, "Milk either comes into the breasts abundantly and is good, or it comes in scantily and is useless" It is the practice, if the mother does not have sufficient milk adequately to nourish her baby, *forthwith to place it on* the bottle Now the question I wish to present for consideration is this Is there no middle ground between entire breast-feeding and bottle-feeding? If the mother has a partial supply of milk why should this be discarded? Is not some breast-milk better for the infant than no breast-milk? The arguments I have presented for breast-feeding apply almost equally to partial maternal nursing Supplemental feeding is not only simple justice to the helpless infant, it is, I believe, beneficial to the mother It relieves her from the drain, if the milk is scanty, it affords her wider personal freedom and while it may sound sentimental, I believe it nevertheless true that breast-feeding stimulates the maternal instinct, and enhances affection for the offspring

Granting that the infant can be reared on the bottle and survive its first year is that all? What about the morbidity of bottle-fed infants? Is it not the general experience that many bottle-fed infants suffer from various forms of indigestion anemia and other diseases of nutrition as scurvy rickets, malformations and general infections, that increase mortality in subsequent years?

I have no statistics to offer, but this is my personal experience I have been giving this subject study for more than five years and during that period have made it a rule in my office work to ask the question whether or not the patient was breast-fed or bottle-fed If the reply was that the infant was bottle-fed, I have endeavored to ascertain the reason As the result of these inquiries I have gathered from 100 mothers who have reared their infants on the bottle, the following information

Only fifteen mothers out of the 400 replied that they positively refused to nurse their infants Three hundred and eighty-five replied that they would have nursed their infants had there not been some reason to the contrary Twenty of this number stated that they were seriously sick following confinement and for that reason could not nurse their infants A number were compelled to wean their infants because of retracted nipples or fissured nipples or mammary abscess and a total of 105 made a failure of breast-feeding during the first two weeks after confinement In about 250 cases the mother said that she had weaned her baby because it was starving or crying or her milk was not nourishing or that she did not have enough milk to supply the infant In reply to the question Did your physician advise mixed feeding? not more than ten gave an affirmative answer I was impressed with the fact that the majority replied that they had never heard of such a thing as mixed feeding To the question "Did your physician examine the breast-milk before advising you to wean the infant the answer was negative in all but [illegible] cases

It is my conclusion that supplemental feeding is not appreciated either by the profession or by the laity This suggests the question "Does supplemental feeding offer any advantage or is it better or safer for the infant than entire bottle-feeding?" As I have already indicated, there is but one answer to this question, but as the experience of any one individual is too limited to have any great value the question can only be answered by the combined experience of many observers

I am firmly convinced that mixed feeding is almost as beneficial to the infant as entire breast-feeding, and I desire earnestly to protest against the fallacious doctrine of *weaning the infant entirely because of insufficient supply of milk or of poor quality of milk or any other reason except some organic disease in the mother* I would urge with all possible emphasis the adoption of mixed feeding in all cases in which there is a deficient amount of milk, and in cases in which the supply of milk is abundant but the mother's health seems to suffer in consequence In these cases I am sure it will be found that supplemental feeding will be of benefit to the mother In cases in which the supply is sufficient but the quality deficient, as ascertained by simple examination of the milk, it is a simple matter to supplement the breast-milk with a modified milk that will make up the deficiency in quality It is a mistake to think that any preparation of milk will do in mixed feeding I am sure failure results from want of attention to this phase of the subject

RESULTS OF SUPPLEMENTAL FEEDING

I wish to report fifty-six cases of supplemental feeding under my care during the last five years In this series of cases I have had the privilege of directing the mother at intervals during her nursing period I freely confess to a number of failures during the same period, but I believe most of them were due to my inability to secure the confidence of the mother In my judgment to attain success, it is essential to have the cooperation of the mother The best way to secure her cooperation is to convince her of the value of the method—that it will not only save her strength but increase the life prospect of her infant, improve its nutrition and confer a relative immunity to disease It is important also that the mother should receive proper medical advice as to her general health

In my experience there are two important difficulties to be encountered and overcome in mixed feeding

1 The infant tends to wean itself from the breast This is the first real serious problem to be met, and without firmness and obedience on the part of the mother failure will result *In some cases it will be necessary to let the baby go hungry for hours* In one case the baby had nothing but water for twenty consecutive hours It then took the breast and never after was there any serious trouble in this case Each time the mother weakens and gives the bottle but increases the difficulty In fact, most failures occur as a result of this tendency

2 Lessening of the quantity of milk If the breasts are not nursed regularly they tend to cease secretion *and also in my experience the milk is of a poorer quality* The use of the breast-pump is a poor substitute in stimulating the secretion

I have found that the safer plan is to give but one entire bottle a day This bottle is usually given at 6 or 10 p m This rule permits the mother to have an evening out, without feeling that she is in any way neglecting her infant At other times the baby is to leave the breast, the time varying owing to the condition of the gland. As soon as the mother feels that it has become soft, the infant is taken away and given the bottle. It is a mistake to permit the infant to strip the breast. This practice is wearing on the mother and likely to induce indigestion in the infant. I have found from experience that ten minutes is usually ample time to keep the baby at the breast. My rule is to let the baby nurse the bottle until it is satisfied. Of course, the quantity will vary owing to the amount it gets from the breast. No rule can be given, but I always have an ample quantity of modified milk prepared. It is my observation that the food should not be too sweet. I have repeatedly observed that when the infant is given condensed milk, there is greater danger of its weaning itself from the breast.

The small amount of prepared food required to cause a gain in weight is surprising in some cases. One of my patients, an infant aged 4 months, had not gained for three months. I was called to advise concerning weaning the baby. In that case the addition of one bottle each evening of 5 ounces caused a gain during the first week. I have frequently observed that supplemental feeding improves the health and general comfort of the mother. In some of my cases the mother would frequently go for several days without giving any bottle. Another advantage is that if the mother feels that she is not quite up to the standard, or that the infant is not gaining normally, bottle feeding can usually be increased.

These fifty-six mothers were from all walks of life. Several were wives of laboring men who were compelled to discharge arduous household duties including washing and ironing. In all these cases the mothers appreciated greatly the relief given by mixed feeding. Three of them were women who were compelled to work all day and to be away from the infant. Two of them found it necessary to pump the breast two or three times a day in order to keep up the supply. Not one of the fifty-six infants were seriously sick during the nursing period. Three developed pertussis, but recovered. All made a satisfactory gain in weight. The mothers were satisfied with the method of feeding, and a number ceased nursing their infants with regret. As a result of my experience and observation, I submit the following conclusions:

CONCLUSIONS

1. Unless the mother is suffering from some serious disease she should nurse her infant.
2. Many failures in breast-feeding occur during the first two weeks, often from preventable causes.
3. It is an unjust aspersion to assert that the mothers refuse to nurse their infants. The majority of mothers will nurse their infants if they realize that it is important.
4. The responsibility for bottle-feeding rests largely on the medical profession. If all physicians believed in breast-feeding and would use their influence with the mothers there would be few infants reared entirely on the bottle.
5. Supplemental feeding provides the infant with the vital elements of breast-milk and to that extent lessens mortality and does not injure the mother's health.
6. Supplemental feeding requires an intimate knowledge of the various modifications of cow's milk and necessitates complete cooperation between mother and physician.

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ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. GRIFFITH AND McCLANAHAN

Dr. David E. English, Summit, N. J.: I have used a plan, which has proved very satisfactory. When the mother's milk is scanty and there is not enough to satisfy the baby I have her nurse the baby and feed it at the same time, that is, put it from one nipple right on to the other. I have two reasons for this, one is that I think the baby's stomach should be filled up when fed, so that it does not have to be fed so frequently. The other is that it gets the mother's milk mixed with the modified milk and gets the action of the ferments in the mother's milk—what Dr. McClanahan calls the vital principle. There are three ways in which this may be done: one is to feed the baby modified milk before he is put to the breast; in doing this we have to find out by experiment how much modified milk to give him. Another is to give the breast first. Some babies refuse modified milk after the appetite has been half satisfied with mother's milk. A third way is to give a little modified milk first and then breast milk and then, if the baby will take any more, finish up on modified milk. By using these little tricks, I have not only been able to keep the mother's milk going and the baby well nourished, but also to help it to digest the modified milk better than it would otherwise.

Dr. Henry J. Gramling, Milwaukee, Wis.: When I find a mother who cannot nurse her baby the first thing I do is to put the baby on modified milk at night. If the mother's milk is scanty and she has to get up at night she will not have enough nourishment for the child the next day. If the mother is nervous it is wise to take the baby away from her altogether at night so that her sleep will not be disturbed. Persistence along this line is usually rewarded with success.

Dr. Thomas S. Southworth, New York: Aside from the fact that breast milk is more readily digested, it has always seemed to me that one of the reasons children do so much better on breast milk is that the average child at the breast requires less supervision than a child on the bottle. Bottle feeding must be constantly changed and modified in order to adapt cow's milk to the child's needs during its first year. Nature does what adapting is necessary in the breast milk. I do not, however, consider that the breast fed child should be allowed to go without proper supervision on the part of the physician, and I believe that a great many of the failures to nurse successfully are due to the fact that the mothers are left to their own resources. I am glad Dr. Griffith used the expression "awakened conscience of the physician." Others have spoken here of the fact that we as physicians have been largely responsible for the decadence of maternal nursing. It is my experience that the man who readily advises a mother to wean her baby and put it on artificial feeding is, as a rule, an unsuccessful artificial feeder.

I am a little afraid that someone might misunderstand Dr. McClanahan when he quoted me as saying that "either the breast milk comes in abundantly and is good, or it comes in scantily and is bad." That is the popular opinion, giving rise to the opinion that if the milk is abundant and good one can continue with it, and if it is scant and bad one must stop it. The latter is not my deduction. I do not believe that there is very much bad breast milk; there is scanty milk, and sometimes it is lacking in a sufficient quantity of fat. When a mother tells me that her child has been removed from the breast because it was having green stools and the doctor said her milk was poisoning it, I know that that doctor was on the wrong track. There are instances when the maternal milk is poisonous, but they are extremely rare. I do not care much about elaborate examinations of the breast milk. I use the Holt apparatus chiefly to find the amount of fat, but we can be misled by the analyses of the milk. I think that we should pay less attention to analysis and more attention to building up of the general health of the mother, and [illegible] the quality of the milk usually takes care of itself. I think that if we increase the m[illegible] more than one or two daily [illegible] stimulation of the breast and [illegible] this reason I then have the child nurse at both breasts during each nursing.

As Dr. McClanahan said concerning his cases of pertussis, through which several children passed successfully, breast feeding is one of the greatest protections to the child, not so much in making it less liable to infectious disease as in enabling it to withstand infections.

Dr. Henry L. K. Shaw, Albany, N. Y.: Those of us who have had experience in institutional feeding find that many lives are saved by simply giving one breast feeding in twenty-four hours. At the Infants' Hospital, with which I am associated, the board of managers authorized the employment of two wet nurses. Five or six babies are often nursed by one wet nurse, who gives each baby one or more nursings in the twenty-four hours and the results are marvelous.

The benefits of nursing the baby for a certain time and then finishing with a bottle feeding have been brought clearly before the profession by Dr. Southworth. He coined the term "complemental feeding" when the breast is followed by the bottle. When the entire breast feeding is replaced by bottle feeding, the term "supplemental feeding" is employed.

I want to protest against Dr. McClanahan's statement that the breast pump does not stimulate the breast. A concrete case will illustrate what I mean. About four weeks ago a mother brought her baby to my office with the following history: The baby was 5 weeks old and had been exclusively breast fed for two weeks. Since then she had been fed on several formulas and prepared foods and had lost in weight. The mother had plenty of milk but because the baby had colic she had been told to wean it by her physician. She still had plenty of milk and used the breast pump once or twice a day to relieve herself. Analysis of the milk showed practically no fat. She was ordered to stimulate the excretion of milk by pumping regularly every two hours and massaging the breast. In a week there was 2.5 per cent. of fat and a few days ago it was over 3 per cent. The baby is now nursing regularly and gaining although it is having two supplemental feedings of modified milk.

Dr. Frank S. Churchill, Chicago: At the Children's Memorial Hospital in Chicago we always keep one wet nurse throughout the summer months two wet nurses. The results are much better with them than without. We do not feed one particular baby with breast milk but get as much breast milk as we can and divide it up among the different babies, giving to each baby perhaps one, two or three feedings in the twenty-four hours; the other feedings are of modified cow's milk. We all know that if a baby has ever so small an amount of breast milk during the twenty-four hours, it can take a higher percentage of the elements of cow's milk than when on cow's milk alone. Our experience has been that the breast pump is very stimulating to the breasts of these nurses, and with it we get large amounts of milk. That and the regular hygienic life which the nurses lead give very satisfactory results. They come in giving as a rule small amounts. They are put on a regular diet, lead an almost perfect hygienic life and the result is a great improvement in their general condition. We do not believe it is fair to a wet nurse to put to her breast the babies in the hospital because we never know how many of those may have congenital syphilis, so we have the breast milk pumped out and fed to the baby. This apparently has a very stimulating effect. The woman soon begins to secrete much more milk than on entering the hospital and in some instances marvelous amounts are secured. Our maximum amount was secured from a wet nurse, a primipara, who gave during the twenty-four hours for a matter of several weeks 5 quarts of milk a day. You may ask how we know. By the method I have just detailed it is quite possible to know exactly the amount of milk we are feeding our babies in the ward. We were feeding to those babies a little over 4 quarts of milk in twenty-four hours. The wet nurse was in addition nursing her own baby. I had that baby weighed before and after nursing for quite a number of times in order to get the average amount. That totaled to a little over a quart.

Dr. Collins H. Johnston, Grand Rapids, Mich.: We often find difficulty in getting wet nurses. Being near Chicago we can sometimes get one there. Last summer we saved the lives of a number of babies by securing a woman who could spare 8 or 10 ounces or a pint of breast milk a day. In hot weather this is a great boon to the babies.

Several of the speakers have referred to the fact that wet-nursed infants are stronger and more vigorous at the end of the first year of life than the bottle-fed babies. Last summer while in Berlin I learned of the results of an investigation along this line which are exceedingly interesting. The investigation included 176 families. Twenty-four of these families with 100 children all breast fed at the end of five years of married life had lost no children, while every one of thirty-three families whose children were all bottle fed at the end of five years had lost one or more children. The results were especially interesting in families in which some of the children were breast fed and some bottle fed. In one group of twenty-nine families with eighty-five breast-fed children and 100 bottle-fed children, at the end of eleven years all of the breast-fed children were alive while 57 per cent. of the bottle-fed babies were dead. In another group of thirteen families with forty-eight breast-fed and twenty-three bottle-fed babies, the former were all alive and healthy while the bottle-fed babies were all dead.

Dr. George D. Scott, New York: It is very interesting to know the conditions which underlie breast feeding and bottle feeding. Those of us who have seen the peasant women of Europe, particularly in the southern part, feed their children any place by simply exposing their breasts and nursing the child and who have seen our own women try hard to nurse their children without being able to, will see the condition underlying this whole question of bottle feeding. Those of us who try to use the bottle a great deal, who try to give food and find it inadequate, cannot help feeling that breast feeding is at all times the best. The underlying cause or condition is psychic. If you go into the psychic condition of a woman's mind, if you let her know that her child can be bottle fed without any responsibility to her and no exertion on her part and no self-denial in food and social pleasures, you will be obliged to put that child on the bottle. If, however, on the other hand you make that woman feel and instil into her mind the fact that breast feeding is best and that bottle feeding is only supplemental to breast feeding, you will, I think, make her try harder to nurse her child. Those of us who work among the poor and lowly, I think, have tried hard to make mothers feed their own children, with more or less success. By encouraging bottle feeding we do humanity great harm.

I want to make a protest against the attitude of the obstetricians, who think they can feed the child maybe from birth. They feed it sometimes for two or three months, and when the baby is in a poor condition they throw it on us. I object to the obstetrician feeding children over one or two weeks. I think then only the pediatrist should control them.

Dr. T. J. Harrington, Milwaukee, Wis.: It seems to those of us who do not spend all our time on diseases of children that a most important question has arisen. Two of the speakers have referred to supplemental feeding. They put the child first on one breast and then on the other, and if necessary give the child the bottle in addition. The point is to find out in what way we can have the mother give the greatest portion of the necessary food in order that the child may gain constantly and steadily. It is a question of how we can get the best work from the mammary gland. It seems to me from my study of the matter that it is a mistake to put the child first on one breast and then on the other and then on the bottle, because you do not give the mammary gland the best chance to do its work. A healthy mother who has sufficient milk for her child nurses first on one breast and then on the other, giving each gland a rest of from four to six hours. Yet you would take a mother who has a limited supply and tease out a small amount from each mammary gland and only give each gland a rest of from two and a half to three hours. I believe that the best results will be obtained, and that supplemental feeding will be at the lowest amount if the mother nurses from only one breast at a time, giving each breast a considerable rest in order that it may attain its highest physiologic power, allowing the child to nurse for from ten to fifteen minutes, then after that and in addition, put the child on the bottle if necessary I say after and not before, because if you put the child on the bottle before, you are not in a position to take advantage of the increasing quantity of milk which that breast may be secreting if you are managing the case correctly and giving the mother proper rest and nourishment

Dr **Charles Douglas**, Detroit It seems to me that the impression has been left that every woman can nurse successfully if we only manage her properly There are certain conditions under which it is impossible to do successful nursing It is not the putting of a certain amount of liquid into a child's stomach that makes success You must have a successful result. Some women cannot nurse successfully no matter what they do They have milk, but it does not produce a good effect on the child What can we do with such a patient? Regulate her diet and give her rest, which is an absolute necessity After this is done and we find that the child still has green, ropy stools, I contend that it is an error and an injury to persist in giving even one or two feedings of that milk in each twenty four hours I am heartily in accord with all the recommendations for giving one feeding when it can be done properly It is nonsense to talk of giving a child breast milk simply because the mother produces it We must know that what we are getting from that mother is right She must have good nourishment, rest, a limited amount of labor, etc to give a good secretion If then the milk fails to produce a good yellow stool, I think that mother's milk should be laid aside and the child put on modified milk. One feeding a day of mother's milk, when it is the right quality, no matter how small, is beyond price There is nothing we can purchase which approaches it in value to the infant

Obstetricians certainly have been doing a great deal of careless work in caring for infants I will go a step further also and say that we are responsible in a large measure for the crude, negligent work being done by midwives and the harm that results Our attention should be directed toward making midwives more efficient, so that they can do better work

Dr **Francis P Denny**, Brookline, Mass There is one argument in favor of supplemental feeding which Dr McClanahan did not mention and that is the advantage to the child of starting cow's milk early and gradually, thus accustoming it to the albumin of the cow If a child has to be weaned suddenly, that child is in a better condition to be weaned if for months it has been having at least one bottle of cow's milk a day

Dr **John Zahorsky**, St Louis, Mo I think it is wrong to condemn physicians generally Most physicians do try to keep the baby on the breast, but there are a great many conditions about breast feeding which, unfortunately, we do not understand, and we might just as well admit it now In the first place, we have the condition of dyspepsia of young infants The baby has bad stools, continued flatulence gets colic as soon as it nurses a drop from the mother and screams day and night The dyspepsia in young infants is attributed to various causes, bacteria, underfeeding, overfeeding, and what not. The truth of the matter is that we know nothing about it It is not too high fat or too high proteid because in many cases which I have attended at least to my own satisfaction I have not found excessive fat or excessive proteid Disturbances in a young infant will often lead the mother to put the baby on the bottle because the baby is suffering and we cannot relieve it Diminished milk supply is the case in a great many healthy well to do mothers They try to nurse their children, but they have not enough milk Some mothers of fine healthy appearance give only 1 or 2 ounces of milk and they are not able to increase the quantity after trying in every way Another reason why some women do not nurse their babies is a painful sensation when nursing This may come from infected breasts Quite a large percentage are due to this cause How can we prevent sore nipples? Then there are some mothers who have a disagreeable sensation when nursing the baby I think there is a definite pathologic condition in these cases, and they should be studied

We say 'Keep them on the breast," but as a matter of fact we all give the bottle very soon We either replace the breast feeding or add to it We have to for if we did not the other doctor across the street would

Dr **Jules M Brady** St Louis It should be emphasized here that it is not always a paucity of the natural food which leads to artificial feeding Many infants sicken as the result of overfeeding on the breast The condition is not correctly interpreted and as a result artificial feeding is instituted

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SOME CASES OF HYSTERIA PRESENTING SYMPTOMS USUALLY FOUND ONLY IN ORGANIC DISEASES *

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In the presentation of a paper with this title I fully realize that I am treading on dangerous ground The subject is of great importance however in that distinguished and trained neurologists have differed for instance as to whether the Babinski phenomenon absent knee-jerks incontinence of urine and feces ankle-clonus and other usual signs of organic disease are ever found in hysteria

In remarking on this I shall only quote a few statements gathered here and there from the literature on the subject Mills[1] thinks that true astereognosis loss of the sense of position true ataxia and hemianopia are not found in hysteria Purves Stewart[2] states that in hysteria absent knee-jerks incontinence of bladder and rectum and the Babinski phenomenon never occur Babinski himself says that hysteria itself is incapable of modifying tendon-reflexes Dana[3] says that the sphincters are never involved except temporarily or through some complication Incontinence of feces never occurs, according to Grainger and Stewart[4] Philip Coombs Knapp[5] gives an excellent biography of the reflexes in hysteria and says that the Babinski and Oppenheim reflexes are never caused by hysteria Tendon-reflexes may be exaggerated within normal limits Whether hysteria can give rise to ankle clonus or loss of knee jerks is doubtful Knapp also says that total paralysis and total anesthesia on one side are very rare He says that Crocq[6] believed he had found ankle clonus and patella-clonus in hysteria and was supported by Charcot Sachs Oppenheim and others and loss of knee jerks has been found by Steiner, Marie Nonne Wigand and Charcot Complete absence of plantar reflexes has been noted by Knapp and other observers Mills[1] states that Van Gehuchten has reported one case with the Babinski phenomenon and ankle clonus which disappeared in a few days In commenting on this he says 'One case however striking is not sufficient to contravene the testimony of scores of other well studied cases

The whole outcome of a case may thus hinge on the view we take of one or more of the signs or symptom found Hysteria, indeed, is a disease which has caused so much controversy that it is our duty to clarify our conception of it as much as possible As in neurasthenia, the present-day methods have done much to lessen the frequency of the diagnosis of hysteria by the neurologist Since we have recognized and classified dementia praecox, manic-depressive insanity, the anxiety psychoses, psycholepsy and others, we have fortunately narrowed the conception of hysteria

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty-Third Annual Session held at Atlantic City June 1912

1 Mills Charles K Jour Nerv and Ment Dis [illegible] xxxvi 407

2 Stewart Purves Diagnosis of Nervous Dis[illegible]

3 Dana Charles L Text-Book of Nervous [illegible] atry p [illegible]

4 Grainger and Stewart Text-Book of Ner[illegible]

5 Knapp Philip Coombs Jour Nerv [illegible] xxxvii 93

6 Crocq Rev neurol 1911 xii 3[illegible]

The cases to be mentioned here are not reported in full because this is deemed unnecessary and would add too much to the length of the paper These cases were frankly hysterical however, as careful examination and subsequent observation proved

CASE 1 —*Hysteria with Pseudo Aphasia* —The patient was a mulatto woman about 55 years of age a member of a neurotic family The patient gave the history of frequent hysteric seizures during the course of her life from puberty In October 1908 on the anniversary of her wedding day, she was taken with a right hemiplegia without facial involvement and without unconsciousness It was accompanied, however, with great difficulty and slowness in speech There were areas of analgesia and anesthesia on the right leg and neither the right leg nor the right arm could be moved voluntarily Slight pressure over the left ovary made her flex her right knee about 45 degrees and the right arm about 90 degrees to the great surprise of her family By one treatment with a strong faradic current she was made to talk better, to put the right hand to her face and to walk She shortly recovered Investigation developed that the patient's husband nine months before had a cerebral hemorrhage with paralysis of the right side and aphasia and had died after a short illness The onset of the patient's symptoms resembled exactly those of the husband except that she was not completely unconscious The interesting point about this case is the hysterical hemiplegia with a pseudo aphasia which complicated the picture

CASE 2 —*Hysteria with Temporary Loss of Sphincter Control* —The patient a young white woman aged 17, was seen during November 1907 This patient had been married when 13 years of age, borne a child when 14 and had used quinin to produce abortion of a 5 months fetus three months before she came under observation She was emaciated to such a degree as to suggest progressive muscular atrophy Her hands had a claw like appearance at first but she could move all of her fingers normally There was marked contraction of the lower extremities especially at the knees Careful examination for organic signs or symptoms was negative Areas of anesthesia were found on the left upper extremity The patient appeared so ill that no eye examination was attempted at this time except that the pupil reflexes were found normal For a few days the patient voided urine and feces involuntarily With careful nursing she gained flesh and with massage and stretching her limbs were straightened She had no further trouble with incontinence and in a few months was well and at home doing her usual housekeeping To determine if spinal anemia accounted for the loss of sphincter control a blood examination was made which was negative The patient's hemoglobin was 62 per cent and her red cell count was 4,500 000 The interesting point about this case is that the patient had incontinence of urine and feces without blood changes or other signs or symptoms of organic disease The regain of sphincter control was permanent The loss was due evidently to simple but great functional body weakness

CASE 3 —*Unilateral Hysteric Amblyopia* —The patient, a white girl aged 16, seen Sept 9 1909 developed hysteria, owing it was thought to overwork at school and a love affair She complained of not having been able to see out of the right eye for a week past Dr John P Davidson made an ophthalmoscopic examination and diagnosed unilateral hysteric amblyopia Hysteria was confirmed by the history of hysteric seizures, [illegible] and pseudoclonus By suggestion she was made to read large type with this eye the first day, medium type the second day and small type the third day after which she had no further trouble The interesting point about this case is, of course, that the amblyopia was unilateral

CASE 4 —*Hysteria in Which the Knee-Jerks Were Absent* —The patient in this, the last and most important case to be mentioned, was a young married white woman, aged 19, seen during July 1909 She had given birth to a healthy child six weeks before Her marriage was a runaway match with a man who drank to excess and who treated her with extreme cruelty The patient had just separated from her husband She gave the history of infrequent hysteric seizures in the past Two weeks before she was seen she had been paralyzed in the right arm When first seen she had loss of power in the right leg, having suddenly regained power in the right arm Examination showed contracted vision fields, complete anesthesia of the right leg from the hip down including the foot, and areas of anesthesia on the left leg and also over the back Hoover's sign showed the paralysis of the right leg to be hysteric in type There was, however, absolute loss of both knee jerks both without and with reenforcement Believing the case one of hysteria, and not being willing to give up the diagnosis on this symptom, I tested the knee jerks of the patient's mother and found them absolutely absent, even with reenforcement The mother, who gave no other symptom of brain or cord disturbance, stated that seven years previous she had been told at Johns Hopkins that her knee jerks were absent The patient's sister, aged 11, was tested and found to have knee jerks A first cousin on the maternal side, aged 7, was then tested and knee jerks were found to be absent even on reenforcement No other members of the family could be tested

The diagnosis of hysteria was made, and with suggestion and several faradic shocks the patient was made to walk The anesthesia cleared up within six days and the patient has remained well This case is interesting because the absence of knee jerks was accounted for as a familial phenomenon and was in all probability congenital

Other less striking cases could be mentioned, but these are possibly sufficient to illustrate the point

The above cases are given in brief outline, not with the intention of trying to prove that in hysteria organic signs and symptoms may occur as part of the symptom-complex and manifestations of the disease *per se*, but to call attention to the fact that definite or apparent organic symptoms may occur as a complication To illustrate A beautiful piece of tapestry was recently found by an art-buyer which appeared genuine and old, except that the general picture was complicated by glass beads being inserted in the representation of a piece of jewelry where diamonds should have been embroidered The piece was rejected Later it was found by closer observation that these glass beads had been sewed on by a child over the embroidered diamonds and the piece was thus proved genuine and was sold at a great price The picture of hysteria may be genuine with an incongruous symptom inserted and if this symptom is not thoroughly investigated and taken out of the picture we are liable to reject the case and believe it not genuinely hysteric.

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Whooping Cough —Any disease which kills 10 000 children per annum is a serious one If bubonic plague were to kill that many children in the United States in one year, the whole world would quarantine against our country A child dead of whooping cough is just as dead as a child dead of plague A child, whose body is weakened by disease is a potential economic loss to the nation Whooping cough is a danger to be avoided and combated in the interest of humanity and the citizens of to morrow —W C Rucker in *Pub Health Rep*

THE RECIPROCAL INFLUENCES OF MORBID CONDITIONS OF THE MOUTH, JAWS AND GENERAL ECONOMY*

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NEW YORK

Much has been written in recent years relative to the unhygienic mouth as an etiologic factor in systemic disease. In fact, a wave of enthusiasm has been created so that oral cleanliness as a prophylactic measure against disease is receiving earnest attention both here and abroad. The municipal appointment of dental examiners in the public schools, in many parts of this and other countries, is evidence of the interest that has been manifested in the care of the mouth and teeth. Great credit is due the dental profession for this important step in the right direction, for its members have been mainly instrumental in bringing it about. The medical profession has likewise been a factor in proving to city officials the need for this advance in the protection of public health.

There is, however, much to be done to establish in medical, dental and lay minds a knowledge of the tremendous bearing that certain mouth and jaw diseases have on the general health and, furthermore, the manner in which many disorders can be early detected by a careful examination of the mouth. I will not dwell on the fact that many persons are rendered more susceptible to disease by the lowered vital resistance created by tooth, mouth and jaw troubles. This is too evident to all who give the matter any thought, but I want to lay stress on the frequency with which patients under treatment for mouth troubles are permanently cured of deviations from the normal which originally appeared to have no relation to the local lesion within the oral cavity. It is equally true that many systemic disorders are either directly or indirectly responsible for morbid conditions of the mouth and jaws.

The time-worn custom of physicians of asking to see the patient's tongue is indicative of the manner in which the oral mucous membrane in its varying condition of health and disease reflects primarily the state of the alimentary tract, secondly, the presence or absence of febrile conditions and, thirdly, circulatory changes. In certain maladies, examples of which are scarlet fever and syphilis, the tongue may exhibit as definite indications of the disease as are found in other parts of the body. In cerebral, meningeal and nervous disorders the tongue may again give enlightenment and thus be a prompt means of arriving at an accurate diagnosis. During convalescence from many diseases and in fact when the patient's life is in the balance between death and recovery, the tongue, if its readings are properly interpreted may aid in encouraging the family or preparing them for the worst. So the tongue during the course of disease may materially aid in determining the prognosis.

The lips of the patient are occasionally studied by careful and observant diagnosticians mainly however to note conditions of impoverished blood or types of anemia, as is the everted eyelid for the study of the conjunctival lining. Occasionally a definite lesion on these parts may be sufficiently evident to attract attention.

How very unusual is it however, for physicians to make careful observations into the conditions of the mouth as a whole, to determine the presence of lesions on the mucous surface of the cheek, the floor of the mouth beneath the tongue, the palate, the gingival margins of the gum, or the roof and floor of the vestibule of the mouth. These parts to the stomatologists impart even greater information at times than do the tongue or lips. Just as does the dark line in lead-poisoning exhibit itself, so do other changes in peripheral circulation leave their mark. Faulty metabolism, auto-intoxication, rheumatism, gout, anemia, diabetes, renal, cardiac and pulmonary diseases all show their ill effects on the gingival border of the mucous membrane and often before symptoms are sufficiently pronounced in other parts to cause the patient to consult a physician.

It is no unusual occurrence in my practice and no doubt my experience conforms to that of many who specialize in the treatment of diseases of the mouth, for me to refer to the family physician patients who on examination of the mouth are found to be in the incipient stage of one of the many maladies aforementioned. Indeed, I have occasionally found a patient to be in the throes of a well-advanced illness of no trivial character. In several instances, the true cause of what appeared to be an ulcerative or gangrenous stomatitis was recognized as the dreaded oral manifestation of leukemia only after I had insisted on a blood examination.

The vast majority of oral and even dental disturbances are markedly influenced by the state of the general health of the patient. In such extreme instances as osteomalacia, rachitis, and even the normal process of pregnancy do the mouth and teeth suffer with the rest of the system the drain on the osseous structures. In most diseases of the dermal covering of the body the prototypes of their lesions can be seen within the mouth, and here, owing to their modified appearances great mistakes may be made in diagnosis.

All that has been said about the influence of systemic disease on the tissues of the mouth is more generally conceded and accepted by medical practitioners than by some of the excessively enthusiastic dental men who claim to cure all forms of so called pyorrhea or suppurative gingivitis by local treatment and local treatment alone. These men fail to realize that they are but maintaining a more hygienic and non-irritating influence on tissues which are rendered susceptible to inflammation and infection by a systemic trouble. Great good is accomplished by such treatment when a proper regard for the underlying cause is kept in mind. Woe to him, however, who attacks boldly by local treatment only a suppurative gingivitis of diabetic origin.

The reciprocal influence of abnormal conditions of the mouth and jaws on the general economy has not been accorded to date the importance that it must receive if the health and welfare of human kind is to be consistently conserved.

Briefly stated, the bearing that the mouth has on the general organism is governed first by the ability of the mouth to perform its normal functions and to contribute its share toward the intricate and marvelous method of providing nutriment to the animal system. A failure in any measure to live up to its contract is accompanied by disturbances further on in the process with associated efforts to counterbalance the evil. So then must other organs and parts suffer or assume responsibilities which will eventually tell on their longevity.

Second, the matter of provision of f [illegible] m through the natural avenue, the mouth [illegible] n-plished without contamination such as is prone to occur when the mouth is not kept mechanically clean, and by this is meant that all surfaces of the buccal mucous membrane and all surfaces of the teeth must be kept free from oral debris and the virile organisms that infest unclean mouths Third, such local infections as arise in spite of a reasonable amount of care must be met and conquered

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* Read in the Section on Stomatology of the American Medical Association at the Sixty-Third Annual Session held at Atlantic City, June 1912.

Stress should be placed on the eradication of infective foci from the mouth, even though radical surgical procedures and the sacrifice of teeth become necessary Current literature, both medical and dental, contains many references to the relation of remote diseases to infections arising within the mouth Infective endocarditis, rheumatism, anemias and other affections of serious moment are occasionally laid to the door of mouth infection Many patients in my practice within recent years have exhibited decided attacks of neuritis involving the arm, shoulder and other parts that have cleared completely following the surgical removal of an infected area from the mouth Patients who are suffering from diabetes kidney troubles, etc which may have been the predisposing cause of gingival disturbances within the mouth, are usually improved when efficient treatment removes the pus which by absorption aggravates the systemic trouble

It is unnecessary for me to dwell further on the many and varied complications that may arise from septic absorption within the mouth

Another important field of study is that which relates to the reflex disturbances that arise as a result of dental and maxillary abnormalities The ear, the eye, the nose and throat, as well as parts further removed from the mouth, are occasionally the seat of baffling disturbances that are traced to conditions within the mouth Neurologists are beginning to realize that some of their cases of melancholia dementia præcox and other types of nervous disorder are occasionally brought on by an impacted tooth, a hidden abscess, or some other equally obscure trouble connected with the mouth and teeth I am seeing such cases with increased frequency and in most instances am able to record a decided improvement if not an absolute cure of the nervous or mental condition

At this time I will not report the cases that have come under my care for I will hope to supplement this brief communication with one which will be more clinical in its nature

Before closing I desire to make reference to a paper by Baker[1] in which he presents a compilation of diseases attributable to mouth conditions According to his list 125 different affections were traced by scientific men to dental and mouth disorders In studying the bibliography of Dr Baker's article, I find that almost all authors quoted are graduates of medicine I refer to this point as the strongest evidence toward the verification of their findings and that such reports were not made as the result of biased observations Though Dr Baker collected seventy nine articles written within the past ten or eleven years from which he culled the references to the large variety of diseases such sporadic outbursts of individual enthusiasm are scarcely adequate appeals for the betterment of the cause for which we are working The dental profession the medical profession and the lay public have begun to realize what scientific stomatology will contribute toward health preservation

[illegible] West Fifty Ninth Street

ABSTRACT OF DISCUSSION

Dr. Joseph Head, Philadelphia There seems to be the general idea that it is extremely dangerous to treat diabetics who have pyorrhea I have in my own practice at present two patients suffering from diabetes, by injection of bifluorid solutions into the pockets I have been able with care and safety to scrape the roots clean and to get a fair amount of healing In fact, teeth which have been very loose at the start have steadily improved, and pus, which flowed from nearly all parts of the mouth, has almost entirely disappeared The discomfort which the patients experienced before they came to me has been relieved, and although they have not been cured, they are comfortable and I feel that there is every reason to believe that as time goes on they will perhaps continue to improve One of these two patients had a lower six year molar that could not be cured of the pus that flowed from around the anterior root I scraped the pocket out but that did not improve it The pulp was apparently healthy and normal, perhaps a little oversensitive, but it was only when I destroyed the pulp in that tooth that the pus ceased to form I have noticed frequently in pyorrhea that a pocket from which the pus could not be eradicated would not heal up until an apparently healthy pulp was destroyed It is easy to understand that the live pulp may be so infected with the overirritated peridental membrane that it may not be able to stand against the inroads of infection that tend to prolong the flowing of the pus around the pockets

Dr. Virgil Loeb, St Louis A great fault in the study of diseases of the mouth is the omission or failure of many men to make a thorough examination of the oral cavity Dr Schamberg confined his remarks in this respect to medical men, but I think he should have made it broader and included the dental men as well There are very few, I think, who take the time to make a thorough examination of the mucous membrane of the oral cavity, if this were done on every patient and only a single instance of the beginning of some malignant trouble were disclosed, it would be well worth while

Dr M I Schamberg, New York I referred to men who attempt to treat cases of pyorrhea in diabetic cases without any regard to the underlying cause I treat diabetic cases constantly and have often noticed after local treatment that there has been a diminution of glycosuria I approach these cases a great deal more cautiously than I do the so called simple cases Cases have been referred to me for treatment after men, some of them pyorrhea specialists have injured the patients materially by disregarding their systemic trouble I have had a number of cases in which the floor of the antrum had sloughed away as the result of pyorrheal treatment applied in diabetic cases

TEMPORARY TOXIC AMAUROSIS AND PARALYSIS FOLLOWING INJECTION OF ETHYL ALCOHOL INTO A CHRONIC EMPYEMA SINUS

Louis Friedman, M D, New York
Lecturer on Gynecology New York Polyclinic Medical School and Hospital Cystoscopist Harlem Hospital

Alcohol amaurosis is usually due to chronic intoxication following the abuse of distilled and malt liquors

Acute alcohol amaurosis is comparatively rare but even in these so called acute cases total or partial blindness has followed when whisky in excess has been drunk for several weeks Methyl alcohol taken in toxic dose has produced blindness within twenty four hours De Schweinitz[1] says

'In so far as the visual effects are concerned the acute cases may be dismissed with comparatively short notice inasmuch as except in rare instances the visual phenomena are of temporary character and amblyopia if it occurs at all is *exceedingly uncommon The ocular symptoms consist chiefly* in paresis of one or other of the external ocular muscles Now and then acute alcoholism seems to have been responsible for almost complete blindness without ophthalmoscopic change, rapidly disappearing under antiphlogistic treatment and total abstinence."

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[1] [illegible] 'The Natural Field of Dentistry Dental [illegible]

[1] *De Schweinitz, G L Toxic Amblyopia* 1896 p [illegible]

I have been unable to find any record of pure ethyl alcohol amaurosis. The following case therefore presents features of sufficient interest to make it worth reporting. It was a case of acute amaurosis which occurred immediately after the absorption of 90 per cent. ethyl alcohol, the mode of entrance was the injection of about 25 c.c. of pure alcohol into a chronic empyema sinus through a cannula introduced into the sinus, the amaurosis was accompanied by temporary motor paralysis of both upper and lower extremities, and was followed by complete recovery.

The patient, I. S., aged 24, single, had always been well up to June 6, 1910, when he was operated on for gangrenous appendicitis. The wound was drained. Following this the patient developed a subphrenic abscess for which he was operated on July 8. One week afterward, symptoms of thoracic empyema appeared. July 15, 1910, a thoracotomy was performed, with drainage.

The appendix and subphrenic abscess wounds healed entirely, but a chronic empyema sinus developed, which was treated up to March 25, 1911, about ten months, without any sign of healing. There evidently was a communication between the sinus and the bronchus, because the first time I injected bismuth paste, the patient nearly choked in an effort to cough up and expectorate the bismuth paste which I injected. Repeatedly on the injection of bismuth paste although in smaller quantities injected slowly, he would cough and expectorate the bismuth.

This treatment lessened the discharge considerably for a while but eventually had to be given up since no benefit resulted. After the sinus narrowed down considerably I began to inject 95 per cent. ethyl alcohol into it, using a narrow cannula, and a 30 c.c. capacity syringe. The injections were repeated at each dressing without causing any untoward symptoms whatever until March 11, 1911, when, after I had injected the sinus with the alcohol, the patient without any warning slid off my table, landing on the floor in a perfectly limp condition. He was unconscious for a few seconds. Believing that he had fainted, I allowed him to stay on the floor until he recovered consciousness, when I asked him to help himself back to the table, but he replied that he was unable to move his legs. I picked him up and placed him on the table, when he assured me that he felt all right but that he could not see me. Absolute flaccid paralysis also was present in both upper and lower extremities. His mind was clear, speech normal, skin and lips normal in color, no cyanosis, pupils were moderately dilated and reacted to light. The patient was unable to see me or any object held up to him, but was able to distinguish light from darkness. Respiration was somewhat rapid and sighing; the patient was unable to move or lift either upper or lower extremities. This condition lasted about twenty minutes.

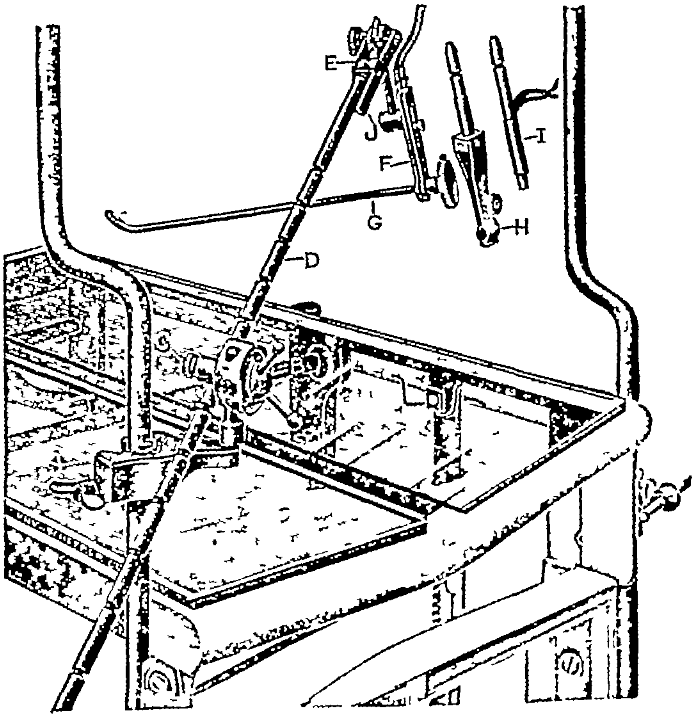
Cutaneous sensation was present. The patellar reflexes were exaggerated. Gradually the patient regained control of his extremities, first his legs, then his arms, accompanied by incoordination, that is, if I asked him to lift his leg he would do so in a jerky, uncertain, draggy fashion, then he would lose control again, the limb falling down entirely limp; or in attempting to lift his arm he could not without simultaneously attempting to lift his leg as well. Muscle resistance was absent at the beginning but gradually returned in both upper and lower extremities. The patient stated that no matter how hard he tried he could not move or control his limbs. In about half an hour all signs of motor paralysis disappeared, and he could move and control his extremities as well as ever, walking without assistance. Complete amaurosis was present for about one hour but gradually his sight returned so that four hours after the accident he was able to distinguish objects and shapes fairly well. Perfect vision was regained in about three days. A competent oculist examined his eyes half an hour after the accident, a slight congestion of the fundus was present. No other ophthalmoscopic change was noted. A month following I did a subperiosteal resection of portions of five ribs; the patient had a rather stormy convalescence but eventually recovered with absolute cure of his empyema sinus.

202 West One Hundred and Thirteenth Street.

CYSTOSCOPE HOLDER

Henry Dawson Furniss, M.D., New York
Assistant Attending Gynecologist, New York Post-Graduate Hospital and New York Red Cross Hospital

In teaching cystoscopy in women the inability to hold steady the long male cystoscope so that demonstrations could be given the students led to the use of shorter instruments. These had some objections, among which was the fact that they are made in few of the different types, so a holder that would allow free manipulation of the cystoscope and that could be fixed in any desired position was a welcome device. I feel that the instrument here presented, which embodies many improvements suggested by use, serves all the purposes for which a holder is desired.



Cystoscope holder

A is a removable piece designed to fit a leg holder of any size from ¼ inch to ¾ inch. On the projection is a short rod over which slips B, this allowing easy removal of the holder proper. B is so designed that it allows an up and down, a circular and a twisting motion of the long rod D. All of these motions can be locked by the large wing nut on B. C is a screw that projects into the slots on the long rod D, thus preventing lengthwise motion after adjustment of length for the particular table on which it is to be used; there is seldom any necessity for a change. The portion F is insulated from D by fiber washers and thus short circuiting is prevented. On the distal end of the spring J is a pin that projects into the slot cut in the piece that is directly connected to the cystoscope; this prevents slipping and allows rotary motion. These pieces are made for all cystoscopes with a rotary contact. J is for the Continental type, I for Wappler instruments. H is a universal holder clamping around the cystoscope shaft. J and I also serve as electric connections. Examinations are made with the cystoscope attached to the holder. With most other holders, attachment is made after locating the part to be seen.

The advantages of using such an instrument are that the teacher can demonstrate to the student any part of the bladder, and also the student can leave the instrument in position to show that concerning which he wishes instruction The instrument holds the cystoscope in any desired position for any length of time If for any reason the examiner is interrupted and has to leave the table, it is not necessary to withdraw the cystoscope or to have some one else hold it, he has only to tighten the nut on B and the one on E Where ureteral catheters are to be left in for any length of time, for the collecting of urine or washing out the renal pelvis, this instrument is of the greatest assistance

For five months I have been using it not only in private, but more especially in teaching which it has made immensely easier I now regard it as almost indispensable

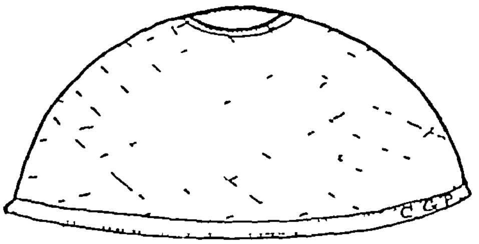
393 West End Avenue

AN ETHER MASK COVER

Carl G Parsons, M.D., Denver

The accompanying illustration represents a cover which I have devised for a drop ether mask It is made by quilting cotton between two layers of No 2 gauze cutting a hole 1½ inches in diameter in the summit, taking out one or two wedge shaped pieces at the base so as to cause the cover to fit the mask and hemming all raw surfaces with tape

The ordinary ether mask is covered with a few layers of gauze Ether is given by the drop method slowly at first and as soon as the patient becomes accustomed to the vapor, the above described arrangement is fitted over the mask with the base carefully approximated to the patient's face and the drug is then dropped onto the gauze through the aperture By this method patients are put under and kept under the anesthetic with a minimum amount of drug the anesthesia is much more uniform and there is no need of winding roller gauze or a cumbersome towel about the mask. The cover can be applied or removed in an instant After each administration the cover should be washed and dried



Ether mask cover

PENETRATING ABDOMINAL WALL WOUND BY REVOLVER BULLET COMPLICATED BY TWENTY TWO INTESTINAL PERFORATIONS, OPERATION AND RECOVERY

A Brigham Keyes M D Chicago

Professor of Gynecology Chicago Polyclinic Assistant Professor of Gynecology Rush Medical College Surgeon to Cook County Hospital

History—C P an Austrian aged [illegible] a machinist was admitted to my surgical service in Cook County Hospital, April 27 1908 with a history of having been shot about a half hour previously The bullet had been fired by a man somewhat taller than himself who was standing to the left and somewhat behind him The external wound apparently bled but little neither had there been any coughing vomiting or passage of blood from the rectum or bladder Comparatively slight pain was complained of in the abdomen itself but there was intense pain in the perineum and in the left side of the scrotum

Examination—The abdomen was slightly distended and there was [illegible] especially on the left side The absolute liver dulness was lost. A small oval dime sized wound was found in the left midaxillary line, on a level with the umbilicus, presumably the place of entrance of the bullet. The left side of the scrotum was somewhat discolored and very tender

Operation—Under ether anesthesia a median incision 10 cm in length, extending from midway to the ensiform downward to the left of the umbilicus to a point midway between this and the pubes was made. The abdominal cavity contained a slight quantity of fluid feces with much clotted blood and probably some bile The first part of the jejunum examined showed eleven intestinal perforations, several were also found in the mesentery Five of the intestinal perforations were closed with fine chromicized catgut and about 10 inches of another loop with six perforations and a badly injured mesentery and blood vessels were exsected and a Murphy button inserted and doubly stitched with Lembert's sutures Eleven more perforations were later found and sutured with fine catgut by Czerny Lembert sutures No more perforations being discoverable, the peritoneal cavity and intestines were carefully sponged clean with moist compresses wrung out of normal salt solution, the parietal peritoneum was closed with continuous catgut sutures, the recti fascia and skin with interrupted silkworm gut sutures and the wounds dressed No drain was inserted The patient showed signs of shock and anemia from loss of blood but responded to a hypodermic of strychnin sulphate, one fifteenth grain Four hours after the shooting, he was put to bed in fair condition with weak but regular pulse and thoracic respiration

Some interesting injuries caused by the ball noticed during the operation and in the exsected loop are shown in the diagram

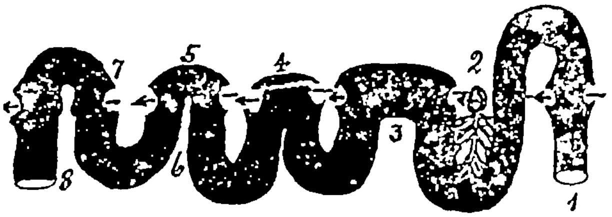


Diagram of peculiar injuries by bullet (1) perforation of the bowel from side to side (2) perforation of both layers of the mesentery cutting the blood vessels (3) perforation of a bowel loop at its apex (4) perforation near apex of small loop (5) perforation at apex in a sharply bent loop (6) intramesenteric perforation (7 and 8) entrance of the ball lower in a loop of bowel intramesenteric exit and reentrance and final exit on a free surface of bowel

Postoperative History—An enema of glycerin and olive oil administered on the evening of the third day was expelled with some flatus and liquid fecal matter The abdominal silkworm gut sutures were removed on the fourteenth day, the wound having healed by primary intention A fifteenth day radiograph showed the Murphy button in the left inguinal region probably in the sigmoid A pelvic radiograph on the seventeenth day failed to show the button, but revealed a 32 caliber bullet lying superficially just over the external inguinal ring which was removed without anesthesia Two subsequent radiographs also failed to reveal the button which had evidently been passed unnoticed by the patient (who was now permitted to go to the closet) on about the sixteenth day The patient was discharged (May 24 1908) on the twenty seventh day as cured May 1911 three years later I exhibited this patient before the members of the Chicago Medical Society (North Side branch) in a condition of perfect health He works as a machinist can lift 150 pounds and has neither disturbance of digestion nor pain The abdominal wound is entirely devoid of any signs of hernia

When asked as to how long before the shooting he had had his last meal he stated that ten minutes before the shooting he had eaten a cheese sandwich and drunk two bottles of beer

Beyond the interest the recovery has despite the large number of intestinal perforations there is the fact that the radiograph showing the bullet over the external ring might well have been misleading causing at least an unfortunate delay, in the belief that the bullet had only contoured the abdominal wall

In conclusion I wish to thank Drs R J Pickard, E B Rogers, J R. Kauffman and R. C Menzies, interns, for their able assistance

122 South Michigan Boulevard.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES"

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH *THE RULES ADOPTED BY THE COUNCIL.*

W A. PUCKNER, SECRETARY

AFRIDOL—Afridol is sodium hydroxymercuric toluylate, $C_6H_3(CH_3)(COONa)HgOH$, 2 3 1

Afridol is an odorless tasteless white powder, difficultly soluble in neutral or acid media but soluble in ammoniacal solution containing ammonium chloride Filtered aqueous solutions of afridol remain unchanged on the addition of ammonium sulphide solution or albumin solutions

If afridol be boiled with hydrochloric acid, an odor of benzoic acid is produced and the cooled solution when saturated with hydrogen sulphide yields a black precipitate of mercuric sulphide

Actions and Uses—It is said to be of value for disinfection of the hands in surgical and obstetric work and for disinfection of various other parts of the body, as well as of instruments and other objects It has also been recommended in the treatment of parasitic diseases of the skin and scalp, such as favus, acne, sycosis and seborrhea

Dosage—Marketed only as Afridol Soap (see below)

Manufactured by Farbenfabriken vorm Friedr Bayer Leverkusen Germany (Farbenfabriken of Elberfeld Co New York) U S patent applied for U S trademark No 81 387

Afridol Soap—Afridol soap is a soap containing afridol 4 per cent.

If an aqueous solution of afridol soap be treated with either ammonium sulphide or albumin solution no precipitate should be formed If an aqueous solution of afridol soap be boiled with hydrochloric acid and the solution made alkaline with ammonium hydroxide the addition of ammonium sulphide solution should yield a black precipitate of mercuric sulphide

Actions and Uses—(See Afridol)

Dosage—Afridol soap is used in the same way as any other soap For the prevention of boils the foam is generally allowed to dry or to remain on for at least ten minutes and then washed off

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page [illegible])

TREATMENT OF ENDOCARDITIS

As mild endocarditis rarely occurs primarily but is almost always secondary to some acute disease, its immediate treatment is only a slight modification of that of the disease that is causing it A complication that is so frequent should always be expected and consequently warded off or prevented, if possible Knowledge of the diseases that most likely cause endocarditis makes frequent heart examinations a necessity to note when it arrives While an extra heart tire sleeplessness, the circulation of unnecessary toxins from a bad condition of the bowels and from improperly selected food all make this complication more likely, its occurrence is, nevertheless, often unpreventable

The most efficacious preventive measures are sleep, rest absence of pain prevention of exertion proper food that does not cause flatulence or other indigestion, good sufficient daily movements of the bowels, the prevention of intestinal distention, and maintenance of a clean moist surface of the body, produced by such sponging and bathing as the temperature demands

The disease having developed, the indications for treatment are really few, in fact, the treatment is mostly negative There is generally but little pain, the temperature from simple endocarditis alone is not high and the acute symptoms tend to abate

Local Treatment—Endocarditis having been diagnosed, especially if there is palpitation or pain, the ice-bag over the heart is often of considerable value but not so efficient as in pericarditis It often tends to quiet the heart, and may be of some value reflexly in slowing the inflammation If it causes restlessness however, and does not diminish, or perhaps in some instances increases, the pain it certainly should be stopped Children, in whom this complication so frequently occurs, generally do not bear the ice bag well Sometimes it may be advisable to substitute warm applications, and often a great deal of comfort is derived from them, the patient soon going to sleep One of the greatest values of either cold or hot applications is diminution of the discomfort from the cardiac disturbance, and the stopping of any pain that may be present If they do not do this, there is no object in using either cold or heat

The discomfort from blisters over the heart during the acute stage of endocarditis is greater than any good that they can do In adults a few small blisters may be used intermittently around the borders of the heart, after the acute symptoms are over, to act reflexly on the heart and possibly aid absorption of inflammatory products Sometimes improvement seems to follow such treatment, it certainly can do no harm

During convalescence the skin over the heart may be painted with iodin, repeated often enough to cause stimulation without injuring the skin, it seems at times to be of value Various iodin ointments or iodid ointments have been used, but they probably have no more value than the administration of small doses of iodid

Systemic Treatment—As this complication most frequently occurs during acute rheumatism, the question arises as to the value or harmfulness of salicylates and alkaline drugs With our recent better understanding of the action of pure salicylates on the heart (either natural or synthetic salicylic acid, which have been shown to act identically, if equally pure, we must believe that in any ordinary dosage they will injure the heart but rarely While salicylic acid will not prevent endocarditis it should be continued, if it is benefiting the arthritis In other words the indication for its use depends on its effect on the joints As it acts at times almost as a specific in rheumatism it would seem that it should be of value in the endocarditis caused by rheumatism On the other hand, the endocarditis occurs during the second or third week of acute rheumatism after the blood has been thoroughly saturated with salicylic acid Therefore it certainly does not tend to prevent rheumatic endocarditis hence for this complication alone salicylic acid is not indicated

Anything that tends to increase the acidity of the tissues and to diminish the alkalinity of the blood whether from starvation or other causes seems [illegible] produce endocardial and myocardial [illegible] if [illegible] inflammation Therefore in [illegible] that seems to be made worse by anything that increases the acidity, alkalies are obviously indicated, and it is probable that an increased alkalinity of the blood tends to prevent endocardial irritation, and may soothe an inflammation already present. Until we have some positive knowledge to the contrary alkalies should be freely administered during endocarditis, especially during rheumatic endocarditis. Potassium citrate in 2-gm. (30 grain) doses in wintergreen water, should be given every three to six hours depending on how readily the urine is made alkaline. This may be given with the salicylic acid treatment and also when the salicylic acid has been stopped. It may be well, if sodium salicylate is being used, to give also sodium bicarbonate, the sodium bicarbonate often preventing an irritation of the stomach from the sodium salicylate, the dose being equal parts of the sodium salicylate and the sodium bicarbonate administered in plenty of water. If some other form of salicylic acid is preferred, novaspirin, which is methylene citrylsalicylic acid and contains 62 per cent. of salicylic acid, is perhaps the least irritant to the stomach of the salicylic preparations. This drug is decomposed in the intestine into its component parts, salicylic acid and methylene citric acid. If this drug is combined with sodium bicarbonate the disintegration into its component parts would be likely to occur in the stomach.

It is essential for the welfare of the patient, especially after a long illness before the complication of endocarditis could occur, and in rheumatic fever in which all meat and meat extractives have been kept from the diet, that small doses of iron should be administered daily. Not only the fever process but the salicylic acid tend to prevent the healthy normal growth of red corpuscles, and such patients suffering from rheumatism are often seriously anemic after the acute inflammation has ceased. The iron administered may be 5 drops of the tincture of the chlorid in lemonade or orangeade, twice in twenty-four hours (and it should be remembered that lemon and orange burn to alkalies in the system and do not act as acids), or 0.1 gm. ($1\frac{1}{2}$ grains) of reduced iron in capsule twice in twenty-four hours, or a 5-grain tablet of *Eisenzucker* (saccharated oxid of iron) twice in twenty-four hours.

As so many times repeated, real pain must be stopped, and morphin either by the mouth or hypodermatically should be used to the point of stopping such pain. If the patient is a young child, the sulphate of codein or the deodorized tincture of opium may be used in the dose found sufficient, and either one will act satisfactorily. The dose given should be small and repeated sufficiently often to stop the pain. The dose necessary for the given individual will soon be learned, and that dose may be repeated at such intervals as the condition may require. Sometimes the hypnotic selected, if one is needed, will be sufficient to quiet the cardiac aches or pains.

If there is much restlessness and the circulation is good, that is, if myocarditis is probably not present, the bromids may be of great value, especially in children. The dose should be sufficient to quiet the nervous system. The drug may be discontinued after a few days if the conditions improve. If the bromid, except in large doses, will not cause sleep, a sufficient dose of chloral should be given. Chloral is one of the most satisfactorily acting drugs to produce sleep and to cause cardiac rest that we have. While it should not be given if there is real cardiac weakness, the good that it does is so much greater than the possible bad effect on the heart that it should not be forgotten for some newer hypnotic. The worst part of this drug is its taste, and the best way to administer it is to have it in solution in water and the dose given on cracked ice with a little lemon juice, to be followed by a good drink of water and a piece of orange pulp for the patient to chew. Ordinarily a bad-tasting drug such as chloral is well administered in effervescing water, but effervescing waters are generally inadvisable when there is any kind of inflammation of the heart, as they are likely to cause distention of the stomach and pressure on the heart. Some physicians prefer chloralamid as a less disagreeable drug and one that acts almost as efficiently as chloral. As the dose of this must be larger than the dose of chloral, it is a question of doubt as to which is the better drug to use. Of the newer hypnotics, veronal-sodium (sodium-diethyl-barbiturate) is among the best. It acts quickly, is less depressant and is a safer salt than most of the other newer hypnotics. It is the readily soluble sodium salt of veronal (diethylbarbituric acid). When combined with any active drug, sodium seems to make it less toxic and less depressant. The dose of this drug is 0.2 to 0.3 gm. (3 to 5 grains).

If the patient is weak, the circulation depressed, the blood pressure low, and the heart rapid, the drug advisable to produce rest and sleep is almost always morphin or some other form of opium. Morphin, with few exceptions, is a cardiac tonic and a cardiac stimulant, unless the dose is much too large. As long as the bowels are daily moved and the food is not given at the time of the full action of the morphin, when digestion might be delayed or interfered with, in most patients the action of this drug during serious illness is entirely for good. The greatest mistake in using morphin for the production of sleep, or for physical and mental rest and comfort when there is not severe pain, is in giving too large a dose. If pain is not severe, or is due to inflammatory distention of some undilatable part, to pressure on some nerve, to distention of some tube by a calculus or to some serious injury to the nerves, large doses of morphin are not needed. Small doses will act much more efficiently. It is excessively rare that a hypodermic of one-fourth grain of morphin sulphate is needed, except for the conditions enumerated. It is often a fact that so small a dose as one-eighth grain of morphin or even one-sixth grain will cause sufficient stimulation of a nervous patient, because its primary stimulant effect on the spinal cord is greater than its depressant effect on the brain, to require another dose (one-fourth grain altogether) to give such a patient rest. On the other hand this patient may many times be quieted by one-tenth grain of morphin sulphate on account of the size of the dose being not sufficient to stimulate the spinal cord. Many a time clinically when one-eighth grain has failed, a dose of one-fourth grain having been apparently necessary, a change to one-tenth grain has proved entirely and perfectly satisfactory, much to the surprise of the attending physicians.

As intimated above in the paragraph on "prevention," the diet during endocarditis must be carefully regulated. It must be sufficient, it must be appropriate for the disease in which the complication occurs, but it must be in such dosage and must be administered with such frequency as to cause the least possible indigestion. Large amounts of milk are rarely advisable. Too much milk is certainly given, even in rheumatism. While pretty well tolerated by children, it is often badly tolerated, as far as digestive symptoms are concerned, by adults. The amount of liquid given should be governed by the amount of urine passed and by the amount of perspiration The patient should not be overloaded with liquid if he does not need it

If the bowels are known to be in excellent condition and not loaded with fecal matters, brisk catharsis is not needed simply because endocarditis has developed If the bowels have been neglected, a small dose of calomel, aided by a compound aloin tablet, is necessary and good treatment Subsequent movements of the bowels should be daily obtained by vegetable laxatives with occasional enemas, as needed With an inflammation of the heart and the possibility of myocarditis developing or being actually present, it is not advisable to use salines freely or often

Whether any drug should be used which acts directly on the heart is often a question for decision As endocarditis is generally secondary to some acute disease, the patient has become weakened already and the circulation is not sturdy, therefore such a drug as aconite is probably never indicated The necessary diminished diet, catharsis, hypnotic, salicylic acid and alkalies all tend to quiet the circulation and diminish any strenuosity of the heart that may be present Unfortunately, during fever processes digitalis in ordinary doses rarely slows the heart, and while it might slow the heart if given in large doses, it would also cause too powerful contractions of the ventricles Digitalis is inadvisable if there is much endocardial inflammation, and especially if there is supposed or presumed to be myocardial inflammation If a patient had already valvular disease from a previous endocarditis, and during this attack insufficiency of the heart was evidenced by pendent edemas, digitalis should be administered but it probably should not be given to other patients during the acute period of inflammation

During rheumatism the peripheral blood-vessels are generally dilated and the skin perspires profusely This is caused not only by the rheumatism, but also by the salicylates The surface of the body should be sponged with cold, lukewarm or hot water, depending on the temperature, especially of the skin The cold water will reduce the temperature and tone the peripheral blood-vessels, the hot water, if the temperature is low and the skin moist and flabby, will cleanse it and also tone the peripheral blood-vessels If the blood-vessels are dilated and the perspiration profuse, atropin is indicated, both as a cardiac stimulant and contractor of the blood-vessels and as a preventer of too profuse sweating The dose should be from 1/200 to 1/100 grain for an adult given two or three times in twenty-four hours, depending on its action and the indications It should be remembered that atropin is not a sleep producer, it may stimulate the cerebrum Therefore at night it might well be combined with a possible necessary hypodermatic injection of morphin

The question of the advisability of strychnin is a constant subject for discussion Strychnin is overused in most patients who are seriously ill In a patient in whom we are trying to cause nervous and muscular rest strychnin is certainly contra-indicated On the other hand if the heart is acting sluggishly, the peripheral circulation is imperfect, and atropin is not acting well it is advisable to give strychnin in a dose not too large and not too frequently repeated Strychnin should be avoided if possible in the evening so that the patient may sleep Whether it should be given by the mouth or hypodermatically would depend entirely on the seriousness of the condition Once in six hours is generally often enough for strychnin to be administered unless the dose is very small

It is rarely, if ever, advisable to use alcohol In certain instances however especially in older patients who are accustomed to alcohol, a little whisky administered several times a day may act only for good, both as a food and as a peripheral dilator But it must be remembered that alcohol is not a cardiac stimulant, and that a large dose will be followed by more cardiac depression Nitroglycerin may act as well as whisky in the kind of cases mentioned Caffein stimulation in any form is generally inadvisable during inflammation of the heart

The duration of acute endocarditis varies greatly, it may be two or three weeks, or the inflammation may become subacute and last for several months Although mild endocarditis rarely causes death of itself it may develop into an ulcerative endocarditis and of course then be serious *per se* On the other hand it may add its last quota of disability to a patient already seriously ill and death may occur from the combination of disturbances

As soon as all acute symptoms have ceased, rheumatic or otherwise, and the temperature is normal, the amount of food should be increased the strongly acting drugs should be stopped, especially the alkalies should not be given too long, and the salicylates should only be given intermittently if at all, iron should be continued, massage should be started and iodid should be administered, best in the form of the sodium iodid, 0 1 to 0 2 gm (1½ to 3 grains), twice in twenty-four hours, with the belief that it does some good toward promoting the resorption of the endocardial inflammatory products and can never do any harm Prolonged bed rest must be continued, visitors must still be proscribed long conversations must not be allowed, and the return to active mental and physical life must be most deliberate

No clinician could state the extent to which the valvular inflammation will improve or how much disability of the valves must be permanent It is even stated by some clinicians that a rest in bed for three months is advisable While this is of course excessive, certainly when the future health and ability of the patient are under consideration, and especially when the patient is a child or an adolescent, time is no object compared with the future welfare of the individual s heart It is one of the greatest pleasures of the clinician to note such a previously inflamed heart gradually diminish in size and the murmurs at the valves affected gradually disappear Although they may have disappeared while the patient is in bed he is not safe from the occurrence of a valvular lesion for several months after he is up and about

While the discussion of hygiene would naturally be confined to the hygiene of the disease of which the endocarditis is a complication, still the hygiene of its most frequent cause rheumatism should be referred to Fresh air and plenty of it and dry air if possible is what is needed in rheumatism and a shut-up overheated and especially a damp room will continue rheumatism indefinitely It is almost as serious for rheumatism as it is for pneumonia Sunlight and the action of the sun s rays in a rheumatic patient s bedroom are essential if possibly obtainable

As so many rheumatic germs are absorbed from diseased or inflamed tonsils or from other parts of the mouth and throat proper gargling or swabbing of the mouth and throat should be continued as much as possible even during an endocarditis

(To be continued

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SOCIALIZING THE BRITISH MEDICAL PROFESSION

As our readers are aware if they have followed our London letter from week to week, a bitter conflict has been going on in Great Britain over the terms of the so called Insurance Act. It is a peculiar fact that although this law is probably the most revolutionary, so far as medical practice is concerned of any measure yet introduced in any English-speaking country, the controversy between the government and the physicians has been almost entirely over the question of compensation and not over the principles on which the law is based. And yet if we are not mistaken, this law marks the beginning of the end of the old system of the individual practice of medicine and of the old relationship between patient and physician — the beginning of a new era, both for society and for physicians. It provides for nothing less than an assumption on the part of the government of the responsibility of providing proper medical care for citizens who are financially unable to secure it for themselves. Under the terms of the act all persons whose total annual income is less than $800 (£160) will be entitled to medical services furnished by the government and paid from a fund made up jointly by workmen employers and the government. Persons having an income above $800 will continue to provide their own medical services as heretofore — for the present. It is estimated that approximately 15 000 000 of the inhabitants of the United Kingdom are by the terms of this act taken out of the field of private practice.

The effect of such a law can be nothing less than revolutionary as far as the economic conditions of the medical profession are concerned. That the discussion has centered almost entirely around the question of compensation shows that physicians have no objection to being made state health officers or to having the present system of private practice largely reduced, if not abolished so long as they are adequately compensated for their work. Another significant fact showing both the disregard of the medical profession by the average politician and the evident lack of understanding [illegible] the medical profession and the public is that in urging the bill the Chancellor of the Exchequer [illegible] of any effort to find out what provisions would be satisfactory to physicians themselves although the burden of the new system would fall entirely on the physicians. The British Parliament passed the bill at the personal insistence of Mr Lloyd George, in spite of the opposition of the British Medical Association which protested among other things that the compensation contemplated was inadequate. Following the passage of the bill the majority of the profession in Great Britain refused to work under the law in its present form and have demanded an increased compensation, as well as the modification of some other features.

The question of a fair and adequate compensation for physicians is, of course, vital. It is, however, largely a local question since a standard of compensation which might be perfectly suitable to one country, or to one locality, would not necessarily be fair to another. Physicians in the United States will, therefore, be more interested in the general plan of the measure. The amount of compensation and the fixing of a maximum income for those coming within the provisions of the law are incidental questions. The important feature is the recognition of the fact that it is the duty of society, as represented by the government, to furnish medical treatment for those who are unable to secure it for themselves. It also means the recognition of the modern physician as a health officer of the state, working for the general good, rather than as a private, professional or business man.

There is room for much speculation as to the ultimate results. For one thing, it practically eliminates the necessity for medical charity and so stops the enormous drain on physicians which has resulted therefrom. If it is true, as was reported several years ago by a committee of one of our large local organizations, that 25 per cent of the professional work done by physicians is entirely gratuitous, the abolition of this enormous nonproductive class of work would be beneficial. Another important consideration is that the adoption of such a plan would do away with any possible mercenary motive which might be alleged against the individual physician or the medical profession as a whole, as a reason for any indifference or apathy toward the development of preventive medicine. A third and by no means less important result will be that those persons who, under the present private practice system are the least able to consult physicians frequently, and who are yet most exposed to and susceptible to preventable diseases can secure the advice and services of medical men before rather than after the disease has developed. That some form of periodic, systematic medical inspection will develop out of the state system of medicine thus created in the United Kingdom seems probable.

Last is the effect which such a measure will have on medical education and the personnel of the profession. If the state assumes the responsibility of providing medical services for any large proportion of its citizens, it must necessarily pay strict attention to the quality of service which it provides, as a physician working under the Insurance Act will be necessarily a representative of the state. This will make it necessary for the government not only to exercise more rigid supervision over medical colleges and the character of medical instruction, but also to adopt some system which will prevent those already qualified to practice from becoming inefficient through laziness or indifference. This necessity has already been recognized in several branches of our own government. For instance, in our Army and Navy, all officers not only are required to pass rigid examinations at the time of their appointment, but are also required to pass examinations at stated intervals, for service and promotion, on pain of compulsory resignation from the service if they fail to qualify. Such a plan compels these officers to keep up with progress in the practical and technical work of their profession.

Physicians in the United States will be interested in the development of this plan in Great Britain principally on account of the light it will throw on such a plan in this country, for the possibility that the adoption of some arrangement of this sort will sooner or later be considered on this side of the Atlantic may be acknowledged. The prevention of disease is becoming more and more recognized as a social and not a professional duty. Most preventable diseases to-day are due to sins of the community rather than to sins of the individual. The state in the future must protect the citizen against disease just as it now protects him from foreign invasion. In fact, the majority of our most dreaded diseases are foreign invaders, as far as civilized nations are concerned.

The lesson which American physicians can learn from the experience of their British brethren is the importance of educating the public on health matters, and of a close understanding and sympathy between the public and physicians. If the relations between the British medical profession and the British public had been as intimate as those which fortunately are now coming into existence between physicians and the people in this country, it would have been impossible for the government to introduce or champion a bill placing such a burden on the medical profession without providing compensation which was fair and adequate. Physicians in all lands and in all times have been generous beyond all other classes in charitable deeds. Yet the physician to-day, as never before, must live comfortably and must have money to pay for instruments, books, journals and graduate instruction, if he is to be able to give his patients such services as they need and as the times demand. The physician of the future, as the official guardian of the public health, must be assured a compensation which will enable him to do his work so that the lives of the people may be protected. If the people understand the importance and value of proper medical services there will be no difficulty about securing fair compensation.

THE PANCREAS AND DIABETES IN THE LIGHT OF NEW EXPERIMENTS

Despite the numerous attempts which have been made from time to time to unravel the secret of the mechanism of diabetes, and despite the failure of any of the proposed theories to afford a convincing solution of the difficulty, the problem retains a perennial interest. For the clinician there is involved the possibility of discovering a therapeutic procedure which would be of the utmost importance for the welfare or rescue of an increasing number of patients, while the physiologist confidently expects to find in the unraveling of the etiology of diabetes, clear indications of the way in which the foodstuffs and notably the carbohydrates are converted into their normal end-products in the organism.

In a previous editorial,[1] reference was made to the possible relation of the liver to certain types of glycosuria. The undoubted involvement of the pancreas in relation to some forms of diabetes at least may be assumed to be familiar. The classic studies on the removal and the transplantation of that organ make it more than probable that the action of the pancreas is exerted through the circulation rather than by intermediation of the nervous system. Presumably there is a chemical factor concerned. The most simple and direct hypothesis assumes that there is produced in the gland some substance — or a hormone, in terms of the recent physiology — which is necessary for the assimilation or utilization of sugar by the tissues. Although the inability to use or oxidize carbohydrate is the conspicuous feature of the diabetes, it is further noteworthy that the utilization of other food derivatives may also be greatly impaired. Amino-acids are said to be excreted in some cases, and the final fatal outcome is commonly characterized by an accumulation of oxybutyric acid and its companions — products associated with the defective catabolism of fats.

There are, however, other plausible hypotheses regarding the pathologic defect underlying the diabetic insufficiency. It has been asserted that the primary difficulty is an increased formation and distribution of sugar in the liver, this organ having become freed from an inhibitory influence previously exerted on it by an assumed internal secretion of the pancreas. Here it is overproduction or failure to conserve carbohydrate properly rather than inability of the tissues of the body to utilize sugar which is made to account for the phenomena. Again it has been suggested that the pancreas ordinarily furnishes some antidiabetic product, acting like an antitoxin to prevent the accumulation in the organism of products which would otherwise injure the sugar-assimilating functions of the cells. The theory of the antitoxic action of internal secretion has been a favorite one in certain quarters and has often been called on to explain the function of the ductless glands. In addition to all the [illegible] sugg[illegible] that the action of the pancreas is not a direct one, but involves the interaction of other organs, such as the thyroid and suprarenal glands.

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[1] Drugs, Diabetes and the [illegible] 19, 191[illegible], p 1400

There is every reason to believe that the muscles are *par excellence* the tissues in which the ultimate consumption of sugar in the body takes place. The conspicuous energy-changes leading to mechanical work occur in the muscles, and because of their predominant bulk and physiologic activity they stand foremost as the organs of metabolism. Much would be gained, therefore, if it could be demonstrated that there is a difference between the muscles of the normal and of the diabetic individual in respect to the capacity to consume sugar. Knowlton and Starling[2] have devised a method for maintaining the heart and lungs of a mammal for many hours in a state approximating normal, while these organs are artificially fed with blood. This has made it possible to compare the performance of heart muscle from various subjects in relation to the character of the blood supplied and the inherent properties of the tissues themselves. Diabetes was produced in animals by removal of the pancreas, and the hearts of such individuals were employed for comparison with the hearts of healthy subjects. The heart muscle of dogs, fed with normal blood, consumes about 4 mg. of glucose per gram of heart per hour. This power of consuming sugar is reduced to a minimum or disappears altogether in hearts taken from animals which have undergone complete excision of the pancreas. The addition of a boiled extract of the pancreas to the blood circulating through the heart of a diabetic animal restores to the latter the power of utilizing the glucose of the circulating blood. From such facts the impression is gained that the pancreas normally produces a substance which is continually discharged into the circulating blood — a pancreatic hormone — the presence of which is a necessary condition for the assimilation of circulating glucose. Removal of the pancreas brings about the disappearance of the substance from the blood and therefore deprives the tissues of the possibility of utilizing carbohydrates as sources of energy. Knowlton and Starling frankly admit that other explanations are not absolutely excluded, however plausible the above deduction may appear. The well known earlier contributions of Professor Starling's laboratory, which have led to the newer conception of hormones in general, inspire confidence in the tentative hypothesis suggested by the perfusion of the isolated heart and assure it a respectful hearing.

THE RESUSCITATION OF THE HEART

More than a quarter of a century ago the physiologist Schiff demonstrated on animals the possibility of resuscitating the apparently dead by means of massage of the heart. Enough experience has been gathered in the meantime to encourage the continuance of this method in appropriate cases. Our knowledge of the working of the heart — its innervation, the coordination of its parts, the intrinsic and extrinsic factors on which a normal cardiac functioning depends — have been so widely extended in the past few years that there is hope of the continued fruitful application of these newer acquirements in the domain of medical practice.

Even under what appear to be most favorable conditions, massage often fails to make the heart beat. Irritability and the power of contraction may be maintained in the organ, but the inner stimulus may be lacking and spontaneous rhythmicity fail to develop. Professor Joseph Erlanger of the Washington University Medical School in St. Louis, to whom science owes numerous valuable contributions in the domain of cardiac physiology, has offered some promising suggestions bearing on the resuscitation of the heart.[1] Contraction of the ventricles can frequently be induced by the more familiar methods. Direct electric stimulation of the ventricles is fraught with considerable danger, since it is extremely liable to set up fibrillation. In attempting to initiate the rhythm of the heart in some other way, Erlanger has proposed to supply, if possible, the impulses along the usual path by which the auricles are normally started beating. The function of the sinus region as a cardiac pace-maker is now well known. Experiments on isolated heart preparations have shown that whereas stimulation of other parts of the auricle rarely if ever results in the development of a series of beats, short periods of tetanic stimulation of the sinus region materially increase the carrying power, into the less rhythmic regions of the auricle, of the impulses originating in the sinus. In this way previously quiescent outlying regions may begin to respond to sinus impulses, or a feebly beating outlying region may begin to beat more strongly.

Since it has been demonstrated on the freely exposed heart that stimulation of the sinus region is a valuable adjunct to massage in the resuscitation of the heart, Erlanger succeeded in applying this principle without formidable surgical procedure such as the extensive opening of the chest requires. A sound carrying a stimulating electrode can be inserted through a small costal interspace opening so that its point will reach the sinus region of the heart exactly, without encountering any resistance whatever. Unipolar stimulation of the sinus can then be employed as an adjuvant to subphrenic cardiac massage. The method has been successfully applied to animals apparently dead from the effects of chloroform in the usual way. Artificial respiration by the insufflation method of Meltzer and Auer is quickly started, the stimulating sound inserted, and the massage given through an incision in the abdomen. The value of the procedure as an accessory in permanent resuscitation has been demonstrated in enough trials on dogs to indicate its feasibility in man. The accidents due to experimental manipulation were few, though there are obvious sources of danger, such as puncture of the heart or lungs, but the respiratory center may fail to recover even when the cardiac performance becomes satisfactory.

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[2] Knowlton, F. P., and Starling, E. H.: Experiments on the Consumption of Sugar in the Normal and Diabetic Heart, Jour. Physiol., 1912, xlv, 146. The method is more fully described in the Journal of Physiology, 1912, xliv, 206.

[1] Erlanger, J.: Sinus Stimulation as a Factor in the Resuscitation of the Heart, Jour. Exper. Med., 1912, xvi, 452.

The results thus achieved experimentally will doubtless encourage others to apply this method of resuscitation to man when a favorable opportunity arises. The occasional death from an overdose of chloroform on the operating-table furnishes an illustration of the possibilities always liable to arise. Animal experimentation in the hands of competent workers has contributed another example of its beneficent aims and its potent helpfulness.

THE ENTRANCE AND EXIT OF SUBSTANCES INSOLUBLE IN WATER IN THE ORGANISM

The mode in which the organism eliminates water-soluble substances that are not burned up in the nutritive processes is familiar. They leave the body through the kidneys and are discharged in the urine, unless perchance the path of excretion is into the intestine, when they pass out with the feces. In the latter way iron, calcium and magnesium, for instance, may become eliminated. Familiar drugs and poisons likewise take one of these channels, the kidneys acting *par excellence* as the excretory organs. Only in the case of volatile substances are the lungs called into play for this function.

It happens occasionally that compounds which have only a sparing solubility in water reach the circulation. How they penetrate the alimentary wall has been somewhat of a puzzle. A few years ago, when it was still supposed that fats were absorbed as such in emulsion, and that they traversed the intestinal mucosa in the form of minute globules which reappeared in the lymph-stream of the lacteals beyond the absorbing membrane, it was not difficult to explain the similar translocation of other particles which are insoluble in the intestinal contents. To-day, however, it is almost universally taught that fats are not only emulsified but actually hydrolyzed in the digestive processes, so that it is not neutral fats, but rather the products of the lipolytic change—glycerol, soaps and fatty acids—which find their way into the absorbing mucosa. Digestion, that is, hydrolytic cleavage, is accordingly just as fundamental a prerequisite for the utilization of fat as it is for the absorption and assimilation of the other groups of nutrients. In line with this is the evidence that unsaponifiable — that is, indigestible — substances like mineral oils or petrolatum fail to enter the circulation and that they pass through the alimentary tract unchanged, as a rule at any rate. This fact forms the basis for the use of petrolatum by some clinicians in the relief of constipation. The soft unabsorbable residue furnishes a suitable texture to the alimentary contents and a bulk which is conducive to spontaneous evacuations. Conversely, the emulsified fat, once it has reached the blood, rarely finds its way out through the walls of the kidney tubules except in most unusual circumstances leading to lipuria. The secretory and absorption membranes are as a rule impervious to suspensions such as the fat globules represent.

There are substances which lack the property of solubility in water but are soluble in fats and oils. The chlorophyl of the green vegetables and the coloring-matter of butter and egg-yolk are familiar illustrations, while a number of common drugs might be cited as additional examples. Do they ever leave the lumen of the bowel in their transit along the digestive tube, or are they always lost with the feces? Recent investigations on the behavior of fat-soluble dyes are likely to throw a new light on this question.[1] Scarlet-red, which has lately received notice as a therapeutic agent,[2] Sudan III, indophenol and annatto are types of these stains which are insoluble in water, soluble in fats and comparatively harmless. Some of the dyes of this class have long been in use for coloring certain food materials artificially. When they are introduced into the organism by various paths they are deposited in the adipose tissue and bone-marrow, which is rich in fatty materials. In investigating the mode of entry and exit of these substances, Mendel and Daniels have found that all are strikingly soluble in bile or solutions of the bile salts. When they reach the intestine, therefore, they can enter the portal circulation dissolved in reabsorbed bile or can find their way into the organism in company with the fat or its derivative fatty acid. They do not pass beyond the liver in the one case, or the lacteals in the other, unless fat is present to transport them, for they cannot travel in solution in the fat-free blood plasma. These dyes follow the fat to the liver under conditions in which such migration takes place either from the fat depots or the circulation itself. In the hepatic cells, however, the dye is separated from the fat and secreted along with the bile into the intestine. From here it may be reabsorbed as before and a cycle of travel established until after gradual losses the last of the pigmentary substance escapes with biliary residues in the stools.

The significance of these findings is more far reaching than a hasty consideration may disclose. They show the bile in the important rôle of a solvent for substances which are insoluble in ordinary watery vehicles or even in blood, and by virtue of this property such compounds may be carried both into and out of the circulation. If they find a suitable carrier like fat they continue to travel *in the body along with this constituent, but in* its absence they are forced to make their exit again along with newly secreted bile. The phenomenon is one which doubtless applies to all compounds not transformed in the body which are more soluble in bile than in water or serum. It is well known that the bile forms the normal channel of elimination of numerous substances and it is reasonable to assume that such substances belong to the solubility category just outlined One may stop to speculate on the possible therapeutic properties of a compound which can thus be made to traverse the paths of the biliary secretion which are occasionally the routes of bacterial invasion

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[1] Mendel, Lafayette B., and Daniels, A[illegible] [illegible] Behavior of Fat-Soluble Dyes and Stained Fat in the A[illegible] [illegible] Jour. Biol. Chem., 1912, xiii, 71.

[2] [illegible]

When the fat-soluble dyes (and presumably this is true for comparable drugs) are transported in the organism with an abundance of food-fat they may find their way into the mammary secretion, according to the observations of Mendel and Daniels One can thus understand how the color of the milk-fat may be influenced by the content of lipochromes in the food, and the facts of daily experience receive a logical explanation The Yale investigators have never found dye in the fetus or newly born young when the mothers were fed on stained food The failure to traverse the placenta emphasizes anew the barrier which this membrane offers to the passage of substances through it and recalls the much-debated question of the real origin of fetal fat

THE CLINICAL MANIFESTATIONS OF EPIDEMIC SORE THROAT

There is a pronounced resemblance in the symptoms and clinical course of the various milk epidemics of sore throat to which attention has been directed of late This is shown clearly in the reports of the Christiania, Boston and Chicago[1] outbreaks In all three the disease is described as beginning suddenly, with or without chill, followed by fever, muscular pain, headache, sometimes nausea and vomiting, prostration, and the usual local symptoms of a more or less severe follicular and membranous tonsillitis and pharyngitis In the Chicago epidemic the pulse seemed relatively slow, and Brooks[2] also notes that in the outbreak described by him the pulse-rate was not increased in proportion to the fever Naturally diphtheria was first suspected and in Christiania the notice of the health department was aroused by the large number of throat cultures sent in by physicians and found to consist of streptococci only Usually the lymph-nodes in the neck became enlarged, sometimes very much so, but in some cases they were tender without marked swelling A moderate leukocytosis has been noted

In most cases of the recent epidemics the attack would subside rather abruptly after a few days, the patient remaining prostrated, however, and regaining strength only slowly, but not infrequently a second attack with even severer symptoms than the first would set in after a week or so of improvement This tendency to relapse has been noted in the earlier epidemics also

The great danger in epidemic sore throat lies in extension and generalization of the infection, and it is this tendency which stamps the disease as peculiar and as due to a virus of special virulence In the recent epidemics, besides abscesses in the neck, often deep-seated, there were encountered otitis, glossitis and other local complications, erysipelas, purpuric and scarlatiniform eruptions, acute articular rheumatism or conditions indistinguishable therefrom with or without endocarditis, and also suppurative arthritis, pneumonia, peritonitis and other septicopyemic manifestations Instances of phlegmonous angina have been described Davis[3] observed that when there was pronounced glandular involvement of the neck, cultures of the blood were usually sterile, while in many cases with no special enlargement of the glands, streptococci would be obtained, and in such cases visceral lesions were common In the Boston epidemic[4] the gravity of the complications seemed most serious in persons between the ages of 40 and 60 "Cambridge is like a city of the plague Whomever one meets the talk is all of who is ill, who has had a relapse, who has died" In children there seemed to be a degree of relative immunity, and when the infection took hold in children the symptoms were gastro-intestinal in nature (Darling)

Statistics giving the relations of the various outstanding manifestations of general infection to the different age periods are not available, nor is anything reliable known in regard to the death-rate That it may be high, higher perhaps than at first expected, would seem to be indicated by the observations of Capps and Miller on a group of 173 cases in which nineteen deaths occurred, it is probable, however, that these were all exceptionally severe cases It is of interest that of the nineteen that died nine had peritonitis, in other epidemics also peritonitis is mentioned as present in about half of the fatal cases

Preble,[5] in commenting on the peculiarities of the clinical picture of the Chicago cases, states that a temperature of 102 might be associated with a pulse of 40, and one of 104 or 105 with a pulse between 80 and 90 He noted also that even in prolonged cases, extending over months, there would be little anemia, and that jaundice was rare, all of which leads him to suggest that possibly it concerned infection of some other type than with the ordinary streptococcus

In order to secure a more accurate knowledge of the nature of the disease in question, there is need now of careful and systematic study on a comprehensive scale of many individual cases during their entire course Unquestionably a great deal of interest and practical value would be brought to light if studies of this kind could be undertaken from the very onset of epidemics, and for this reason as well as in the interest of prompt prevention of further spread, special efforts should be made to recognize outbreaks in the earliest stages Only in this way can we learn whether we are dealing with more than one disease, whether milk may convey still unknown diseases which like scarlet fever and small-pox open the door to streptococci, or that it concerns, as is now taken for granted, only the varying manifestations of primary streptococcus infection.

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[1] Capps Joseph A and Miller Joseph L The Chicago Epidemic of Streptococcus Sore Throat and Its Relation to the Milk Supply The Journal A M A June 15 1912 p 1848

[2] Brooks Lancet London 1910 ii 1391

[3] Davis David J Bacteriologic Study of Streptococci in Milk in Relation to Epidemic Sore Throat The Journal A M A., June 15 1912 p 1852

[4] Winslow Jour Infect Dis 1912 x 73

[5] Sore Throat and Milk Supply abstract of discussion The Journal A. M A. June 22 1912, p 1933

"FROM THE EAST, LIGHT"—AND DISEASE AND DEATH

Ex oriente lux has long been an adage emphasized by those whose education or habits of thought were more or less derived from Eastern sources. That the sun's lighting comes from the East is an accident of the earth's direction of rotation, and that from the Orient first came the semicivilized races to start a better civilization in the Occidental world is also due to another "accident"— that of climate, which allowed man to rise out of savagery. The half-way house, as it were, of the migrating Oriental was the Mediterranean semicivilization, which bore within its blood the germs of its own death, and which was illustrated in the fall of the Roman Empire.

The heart of orientalism is belief in the supremacy of fate, which cannot be withstood or surmounted. This implies slavery to disease and death. The Oriental supinely accepts disease, even when plainly due to his own sin or recklessness or when easily obviable or curable, as the unalterable law of fate, either as punishment for spiritual sin or as the vindictiveness and tyranny of his irresponsible and unseen rulers. A contradictory attitude characterizes the Occidental point of view. Disease and premature death are not the result of fate, but may be prevented or cured. The history of medicine and of diseases everywhere demonstrates this truth. The best illustration is the marvelous statistical record of suddenly occidentalized Japan in her late war as regards the death-rate of her soldiers.

Compare that with the reports which come as we write of the Turkish conditions in Constantinople. This city of over a million inhabitants, in constant touch with our Western civilization, is sewerless and so insanitary that the banished "street scavengers," the dogs, would have partly prevented the present unspeakable accumulations of filth "even in the most important thoroughfares." Cholera, Asiatic cholera, small pox and typhus are reported to be raging and Occidental Europe, despite all its hygiene and medicine, may soon be overswept by these dread diseases.

The lesson to be learned, treasured and put into action, is that for self-protection, if not for a better motive, scientific medicine should be organized and should extend its power — its gospel — to these laggards in civilization in Oriental countries. Hygiene and preventive medicine are their greatest need, to give it to them our greatest privilege and duty. The medical missionaries have done much to break the news to the Oriental, but they have had so little power and their number has been so few that their work has been largely individual and curative rather than social and hygienic. Here is a sadly neglected opportunity for the thousands of philanthropic capitalists of our Occidental nations to lift the Oriental world out of its disease-scourged and death-bitten fatalism. We in the West have the right to demand in self-defense, if for no other reason, that the greatest evils of life shall not be loaded on us by the inefficiency and laziness of a nerveless fatalism. The medical profession is prepared and able to second such a hygienic crusade.

Current Comment

SUGGESTION AND SUICIDE

That the suggestive effect of reading details of suicides is a powerful factor in the causation of suicide among susceptible persons is recognized. The suggestion is more likely to have influence when in the account of the suicide some poisonous article commonly found in households, such as phenol, Lysol and Rough on Rats, is named as the agent employed by the suicide. In New South Wales newspapers have been asked by the pharmaceutical board not to publish the names of poisons used by suicides. In several instances leading newspapers have heeded this request, particularly in connection with Lysol poisoning cases, which are numerous in all the states of the commonwealth.[1] The House of Delegates of the American Medical Association in 1910, adopted resolutions[2] to the effect that the publication of details of suicides in newspapers is one of the potent causes of other suicides through suggestion, and it was recommended to the public press that the details of suicides be omitted from publication. In an editorial[3] referring to this action of the House of Delegates we made certain recommendations by which the influence of the publication of details of crime might be tested. While it is the consensus of opinion that the publication of details of suicides does promote further similar acts, the newspapers assert that it is their duty to publish the news. In adopting this attitude the newspapers are assuming a serious responsibility, and some authoritative restriction of such publication would seem to be desirable. A definite and strong expression of public opinion against this practice would no doubt have a better effect even than legal enactment.

THE DEATH OF THE HEART

Many a physician will recall the lesson in elementary physiology which introduced him to what Huxley fancifully called the "tripod of life"—the brain, lungs and heart. The heart is the last leg on which life ultimately stands, and it becomes a matter of no little interest to know how the most vital of organs enters the state known as death. What is the last part to die? The stimulus of the heart beat apparently originates in the region at the junction of the superior vena cava with the right auricle Here rhythmicity is most highly developed and here it has been assumed that life takes its last stand at the spot where the cardiac pace-maker is located In the hospital of the Rockefeller Institute for Medical Research at New York, Dr G Canby Robinson[1] has made records from patients before and during the actual stoppage of the heart, using the electrocardiograph, which can be employed without disturbing the individual in any way Cardiac activity in some form or other may persist for more than half an hour after all the usual clinical signs of death have occurred — after respiration has finally ceased, when no heart signs can be heard, and muscular relaxation and the general appearance of the patient indicate that death has ensued There was no uniformity in the changes in the mechanism of the heart-beat Sometimes the ventricular outlasted the auricular activity, in other cases this was reversed, or the two parts of the heart were found to cease synchronously Complete dissociation between the two divisions of the heart, ventricular fibrillation and other disturbances of coordination were among the phenomena noted In view of such an inconstant variety of lethal phenomena Robinson is led to conclude that when death occurs from an acute infectious disease "there is no one point in the human heart which may be considered as the *ultimum moriens*"

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[1] Pharm. Jour., Oct. 12, 1912, p. 441.

[2] The Journal A. M. A., June 18, 1910, p. [illegible]

The Journal A. M. A., July 16, 1910, p. [illegible]

A PREMATURE PUFF

The National League for Medical Freedom issues a monthly publication called *Medical Freedom* In its October, 1912, issue, it quotes a somewhat lengthy article from the New York *Telegraph* Part of this article follows

> In view of the restoration to health of Miss Mabel Hite, the actress, it seems to be proper to point out to physicians that if they wish to wage successful war on Christian Science healers, they should accomplish what those earnest men and women do Miss Hite is a popular actress known all over the country, and the theater going public was shocked several months ago when it was announced on the authority of physicians that her days were numbered—she is only 26 years old. She was under the care of doctors They used their knives on her body and dosed her with their drugs "Affliction sore long time she bore, physicians were in vain" They told the public that she would die, and her manager called up the *Morning Telegraph* office and announced that the doctors had given her up It was published broadcast.
>
> Then Miss Hite herself was told that she could not live and at the suggestion of her mother she turned to Christian Science Soon she was able to leave her bed, her weight increased, she went out for rides, and last Saturday attended a baseball game She is on the road to recovery
>
> Now the doctors were mistaken when they announced that she was dying, and Christian Science cured her The public will believe with Miss Hite that the healers of Mrs Eddy's church have made her well They robbed death of its terrors, got her in a calm frame of mind set their wills and hers to work and the young woman began to get well
>
> All this leads us to say that physicians who make mistakes in a matter of life and death should go slow in their criticism and their warfare on healers who really heal

To all of which it is unnecessary to make any detailed reply, as the newspapers report that poor Mabel Hite died of cancer, Oct 22, 1912

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[1] Robinson G Canby A Study with the Electrocardiograph of the Mode of Death of the Human Heart, Jour Exper Med 1912 xvi 201.

THE TOXICITY OF THE URINE IN MEASLES AND OTHER INFECTIOUS DISEASES

It has been shown by Pfeiffer[1] that in anaphylactic shock and peptone poisoning the urine becomes extremely toxic Aronson[2] has further demonstrated that in poisoning with Friedberger's anaphylatoxin, so called, and also with poisons made of typhoid bacilli a similar toxicity occurs, and Esch[3] has demonstrated its occurrence in eclampsia On the basis of this work, Aronson and Sommerfeld[4] have studied the toxicity of the urine in measles The observation of von Pirquet that in measles during the exanthem there occurs an indifference to tuberculin in patients who have previously reacted strongly, they would explain as the result of an increased resistance to anaphylactic poisons in this disease They found that during the attack there was a remarkable increase in the toxicity of the urine Guinea-pigs injected intravenously with 2 c c of urine from healthy patients showed no noticeable reactions, but animals injected with urine from measles patients died usually in a few minutes or else became extremely ill, the symptoms resembling those of anaphylactic shock Doses as small as 0 5 cm were found to bring about typical reactions The toxicity of the urine is not parallel to the severity of the illness, to the diazo reaction or to the passing of the exanthem There is no rule as to the duration of the excretion of toxic urine, nor does the toxic action bear any relationship to the specific gravity The toxicity is not lost by boiling or freezing, but the toxic substance is dialyzable On reinjection it was found that a first dose gave no protection, and horse-serum also failed to protect In a study of other infectious diseases it was found that a similar toxicity occurs in serum disease, whereas in scarlet fever no such poisonous urine is excreted Aronson and Sommerfeld believe that whereas in measles the exanthem is an expression of anaphylaxis, in scarlet fever it is the direct result of the action of the causal organism on the skin In typhoid, tuberculosis, diphtheria and pertussis the urine was found to be innocuous These results are of interest and, if corroborated, may prove of importance The demonstration of a relationship between measles, eclampsia, serum disease and poisoning with anaphylatoxins may be of value in determining the nature and etiology of the first two It is also suggested that as an aid in differential diagnosis between measles and scarlet fever, between serum disease and scarlet fever and in other exanthems, this reaction may prove of considerable practical value

THE PHYSICIAN IS RESPONSIBLE

We present this week in the Propaganda for Reform department some facts regarding a widely advertised pseudomedical fraud — Duffy's Malt Whiskey While this preparation is not so widely advertised in medical journals as it was, it still appears in the following

Buffalo Medical Journal
Medical Standard
Medical Summary
Therapeutic Record
Charlotte Medical Journal
Medical Brief

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[1] Pfeiffer Ztschr f Immunitätsforsch u exper Therap., 1911 x, 550

[2] Aronson Berl klin Wchnschr., 1912 xlix 14

[3] Esch München med Wchnschr 1912 lix 461

[4] Aronson and Sommerfeld Deutsch med. Wchnschr., 1912 xxxviii, 1733

PROGRESS AND REACTION

The influence of the propaganda against medical fakes is repeatedly shown and in no way better than in the changing attitude of publishers toward the admission of advertising matter To the disgrace of the medical profession it must be said that as a class the publishers of lay journals are showing a greater desire to rid their advertising pages of fraudulent medical advertisements than are the publishers of medical journals Hardly a week passes without some evidence of the fact This week we have received a copy of the *Pulaski County Democrat*, a newspaper published at Winamac, Ind By the same mail we also received a copy of a Colorado medical journal—the *Denver Medical Times* The newspaper has an editorial entitled "Advertising Fakes," in which[1] the editor tells why the publishers turned down an advertising contract for the "consumption cure" fraud, "Nature's Creation" The medical journal on the other hand, has an editorial entitled, "The Medical Index Expurgatorius and Independent Journalism," in which the editor boasts of the fact that the proprietary preparations advertised in his journal are not confined to those that have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies Incidentally he takes the opportunity to attempt to belittle both the Council and the American Medical Association A glance at the advertising pages of the *Denver Medical Times* makes plain why the publishers of that journal are not willing to accept the findings of the Council on Pharmacy and Chemistry Practically the whole of its advertising receipts are derived from the exploitation of proprietaries that either have not been approved by the Council or have at various times been shown to be fraudulent or worthless "Nature's Creation" was examined in the Association's laboratory and found to be essentially a solution of potassium iodid in water and alcohol To sell such a mixture as a cure for consumption is of course a fraud When the *Pulaski County Democrat* was offered an advertising contract for the stuff, the publishers wrote to The Journal for information On receiving the data furnished, they naturally refused to lend their advertising pages to perpetuate the fraud "Papine," when examined in the Association's laboratory was found to be essentially a watery-alcoholic solution of morphin with glycerin It is sold under the claims that it does not "show habit-forming tendencies" and "does not suppress the secretions Such claims for a disguised morphin preparation are just as fraudulent as the claims made for Nature's Creation but the *Denver Medical Times* is perfectly willing to sell its pages to exploit this preparation—and many others that are just as bad—and to blackguard those men whom the American Medical Association has seen fit to appoint to investigate and expose fakes of this kind Though it is typical of over two hundred medical journals published in this country, its importance as a medical journalistic factor would not have warranted its mention but for the coincidence of its arrival in the same mail with the *Pulaski County Democrat* The attitude of the *Pulaski County Democrat* is typical of a large class of conscientious newspapers The attitude of the *Denver Medical Times* is equally typical of a large class of self-styled independent medical journals—and the medical profession is to blame? Will physicians clean up abuses of this sort within the profession on their own initiative or will they wait until an outraged public opinion forces them to do so?

Medical News

CALIFORNIA

Commission to Name Health Director—The Oakland Civil Service Board has decided to throw open the eligibility list for candidates for head of the department of health of the city to practitioners all over the United States and the following committee has been named to act with the civil service board to make the elections Dr W F Snow Sacramento secretary of the State Board of Health, Prof Charles Gillman Hyde head of the Board of Sanitary Engineering in the University of California Dr George W Shaw director of the State Hygienic Laboratory and Drs E N Ewer and H C Thomas Oakland

Medical Board Upheld—Judge Sturtevant in a decision made October 29 held that issuance of permits to medical specialists to practice their so called specialties in California, without regular licenses to practice is contrary to the constitution The question was raised by a mandamus petition made by John L Bohannon to compel the state medical board to issue him a permit to practice as a cancer specialist declaring that he had conformed to all the regulations of the medical practice act by showing that he had practiced his specialty for thirty five years and for fifteen years of that time in the state Judge Sturtevant's decision upholds the action of the medical board

ILLINOIS

Contagious Disease Hospital—It is reported that $65 000 has been raised for the North Shore Contagious Disease Hospital Evanston This leaves $35 000 to be subscribed

One Fifth of Town Ill with Typhoid—The State Board of Health received notice November 11 that sixteen cases of typhoid existed in Hillview Green County a village with a population of eighty Dr J C Westervelt Shelbyville assistant secretary of the state board has been sent to Hillview to make investigations

Personal Dr Clarence F Holmberg Springfield was seriously injured in a runaway accident November 12 and is under treatment in St John's Hospital——Dr J F Blackwelder Litchfield was painfully injured in a runaway accident, November 11 —Dr J M Hoyt Fillmore has been appointed local surgeon of the Clover Leaf System——Dr F M Eckard, Peoria has been elected coroner of Peoria County

Chicago

Larger Appropriation Needed—Health Commissioner Dr George B Young has asked for an appropriation of $880 000 for the Health Department for 1913 an increase of $166 000 over the appropriation of 1912 This appropriation will include the money necessary to aid in the enforcement of the milk, cold storage drinking cup and towel ordinances and will provide also for the required addition to the corps of inspectors

INDIANA

Physicians Equip Surgical Ward—Physicians of Indianapolis have contributed the necessary funds to equip the surgical ward of the new building of St Vincent's Hospital The new institution will have accommodation for five hundred patients

Personal—Dr C B Stemen Fort Wayne who has been ill for three weeks has recovered —Dr J A Edmonds Hebron was seriously burned while assisting in putting out a fire at Hebron November 7 ——Dr John M Cunningham has succeeded Dr Eugene B Mumford as inspector of contagious diseases in the city board of health of Indianapolis

KENTUCKY

Health Department Bulletin The monthly bulletin of the Louisville Health Department has appeared [illegible] the title *Health and Hygiene* In the November issue the bulletin features the hookworm investigation and also gives a number of terse health rules

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[1] This editorial is reproduced in full in the Propaganda for Reform department this issue

Personal—Dr William A Young, Newport, has been appointed surgeon in chief of the Cincinnati Division of the Chesapeake and Ohio Railroad and Drs Carey E Wamsley, Newport, and S P Garrison, Bellevue, have been appointed assistant surgeons——Dr John W Scott, Lexington, while on his way to New York, was stricken with appendicitis and was operated on in a hospital in Altoona, Pa——Dr J T Crice, assistant superintendent of the Central Kentucky State Hospital, Lakeland, has resigned——Dr Henry G Hartman, Louisville is suffering from septicemia following an injury to the right hand received while cranking his automobile

Trachoma—At the regular bi monthly meeting of the Kentucky State Board of Health held in Louisville, November 14, one of the principal matters discussed was the report of Passed Assistant Surgeon John McMullen, U S P H Service, on trachoma as it exists in the mountains of Eastern Kentucky The investigation included six mountain counties and one adjacent county In all 3,974 persons were examined, 12½ per cent of whom were found to be suffering from trachoma For the purpose of this report, diagnosis was made only in positive cases, the suspicious or possibly incipient cases not being included In Knott County about 18 per cent were affected by the disease, including two out of twelve school children In 400 persons not in schools, 102 cases of trachoma were found In about 1,050 individuals examined in this county, 221, or about 20 per cent, were found to be suffering from trachoma In the schools, the percentage of trachoma varied from 2 to 44 per cent, with a general average of about 18 per cent In Perry County 310 persons were examined 52 of whom, or about 16 per cent, had trachoma In Breathitt County out of 614 persons examined, 12 per cent were found to have trachoma In Lee County, out of 668 pupils examined, 8 per cent were found to have the disease In Clark County in the Blue Grass region, in eleven schools containing 436 children, about 3 per cent were found to have trachoma The cure of existing cases is a problem which will require time and money It was suggested that if possible a clinic, such as is now being held by Dr J A. Stucky in Lexington under the auspices of the W C T U Settlement School at Henderson, Knott County, should be established that accurate records should be kept of the cases, and district nurses sent to follow the patients up, and see that the directions of the physicians are carried out A system of movable or field hospitals should also cover the same territory periodically, in order to see the old patients and also any new patients, just as is now being done in the hookworm dispensary system——The State Board of Health has decided to petition the United States Public Health Service to detail two men and such aids as may be necessary, to establish a series of dispensaries in cooperation with the Rockefeller Sanitary Commission and the State Board In these dispensaries attention should be given to trachoma, tuberculosis, hookworm, pellagra and typhoid fever

LOUISIANA

Sanitary Science at Tulane—Three series of courses in sanitary science were started at Tulane University this session for medical science and engineering students specializing in sanitation The medical graduates of this course expect to become health officers or members of boards of health, the science graduates, experts on sanitary biology, and the engineering, sanitary engineers At Tulane the engineering and sanitary laboratories are on the same campus, and the School of Tropical Medicine has at its service the Charity Hospital clinics In the senior class of the sanitary engineering course, instructions are to be given in water supply, framed structures and reinforced concrete construction by Prof Donald Derickson, formerly of Cornell University, and instruction in laboratory work and in sanitary microbiology will be given by Dr Creighton Wellman and his assistants in the School of Tropical Medicine

MARYLAND

Personal—Dr Jeptha E Pitsnogle, Hagerstown, sustained serious bruises by the caving in of a well, recently——Dr Charles G Hill, alienist of the Mount Hope Hospital, was struck by an automobile, November 12, and seriously injured

New Officers—Washington County Medical Association at Hagerstown, November 15 president, Dr W M Reichard, Fair Play, secretary, Dr W D Campbell, Hagerstown

Baltimore

New Emergency Ward at Hospital—The Baltimore and Ohio Railroad has decided to build an emergency ward at the Maryland University Hospital to cost about $5,000 and be in charge of Dr Page Edmunds

Hospital Fund Grows—The building fund of the South Baltimore Hospital now amounts to $16,000 The trustees have decided not to commence work on the building until $20 000 has been secured

Personal—Dr John C Harris, an old practitioner of Baltimore, was stricken with cerebral hemorrhage October 31——Dr G Milton Linthicum has been appointed assistant surgeon of the Fifth Infantry, N G Md, vice Dr W P Morrill——Dr H W Kennard has been appointed assistant superintendent at the School for the Feeble Minded, Owings Mills

MISSISSIPPI

Vital Statistics Law Obeyed.—Reports from the Mississippi State Board of Health indicate that the vital statistics law, which went into effect November 1, is being conformed to, with very few exceptions, by physicians throughout the state.

Health Day—Health Day was observed in Mississippi November 20 The exercises of the day were carried out by the State Board of Health, with the cooperation of the School Improvement Association and the Mississippi Federation of Women's Clubs

NEW YORK

Small-Pox—The State Health Department has been notified that there are seventeen well developed cases of small pox in Hancock, Delaware County

Child Hygiene Bureau Opens—The Bureau of Child Hygiene of the Buffalo Department of Health was opened October 24, with Dr D V McClure in charge

Personal—Dr C S Albertson has been elected president, Dr James K Stockwell, vice president, and Dr G C Elder, secretary of the medical staff of the Oswego Hospital——Dr and Mrs A J Avery, Northville, celebrated their golden wedding anniversary recently——Dr James H Donnelly has been appointed tuberculosis inspector by the health officer of Buffalo

County Fair Health Exhibits—The Bulletin of the State Department of Health for October describes the health exhibit which was exhibited by the department at a series of county fairs, acting in cooperation with the New York State College of Agriculture at Cornell University A special circular entitled "Health Hints for Country Households," was distributed at the fairs, at Batavia 1,750 of these were put in farmers' wagons Prof H N Ogden of Cornell University and of the division of publicity and education of the department was in charge at the county fairs and was called on to answer many questions regarding ventilation, diphtheria antitoxin and adenoids Antagonism to vaccination was frequently voiced and showed the need of educational effort in this direction It is estimated that the exhibit has been visited by not less than 30,000 people

New York City

Cancer Research Fund for Columbia—Executors of the estate of George Crocker have filed their final accounting with the courts which shows that Columbia University has received from the estate $1,563,000 for the cancer research fund

Reception to Dr Carrel—A reception was given in honor of Dr Alexis Carrel of the Rockefeller Institute of Medical Research at the New York University, November 16, when the French ambassador delivered to Dr Carrel the Nobel prize in medicine for 1912

University Club Entertains Surgeons—The University Club, Brooklyn, gave a dinner November 9 at which 300 were present, and among the guests of honor were Mr W Arbuthnot Lane, London, England, and Drs William J Mayo, Rochester, Minn, John B Murphy and Albert J Ochsner, Chicago, Robert C Coffey, Portland, Ore, George W Crile, Cleveland, and Edward Martin and John Clark, Philadelphia

Public Clinics—The Department of Public Charities of the city of New York has issued orders which were communicated to the Academy of Medicine on November 7, that on and after the first of October, 1912, all clinics held in the amphitheater and operating rooms of the hospitals of the Department of Public Charities shall be open to duly licensed graduates in medicine and to students in all regular organized medical schools and colleges It was also ordered that tickets should be issued by the secretary of the Department of Public Charities for distribution by the secretaries of the several medical schools and societies of the City of Greater New York, which would entitle the registered holders thereof to admission to these clinics

OHIO

New Officers—Second District Medical Society at Dayton, October 24 Dr W H Humphrey, Yellow Springs, president

——Tenth District Medical Association at Mount Gilead, October 15 president, Dr J H. Jackson, Edison, secretary treasurer, Dr J J Coons, Columbus The next meeting will be held in Columbus ——Seventh District Medical Association at Coshocton, November 7 president, Dr E B Shanley, secretary, Dr E D Moore, both of New Philadelphia

Hospital News—The entire building fund of $325,000 and $80,000 of the endowment fund have been raised for the new proposed Babies' Hospital, Columbus ——Dominican Sisters have opened a free dispensary in Columbus for the sick poor in cooperation with the local society of St Vincent de Paul ——Creditors of the Eddy Road Hospital, Cleveland, are said to have filed a bankruptcy petition in the federal court and asked for a receiver ——The name of the Women and Children's Free Medical and Surgical Dispensary, Cleveland, has been changed to the Woman's Hospital of Cleveland

Personal.—Dr W M. Bucher, Cleveland, has been appointed superintendent and resident physician of the Municipal Tuberculosis Sanatorium at Warrensville ——Dr G W Garrison, Utica, is reported to be seriously ill as the result of a cerebral hemorrhage ——Dr William T Miller, Cleveland, has been reappointed a member of the State Board of Health ——Dr James McKinley, Harrisburg, is reported to be seriously ill with nephritis

PENNSYLVANIA

The Cost of Small-Pox.—Pittsburgh expended $42,024 91 in its recent efforts to avert an epidemic of small pox.——The expense of the recent small pox epidemic to Carbondale as estimated by the State Department of Health is $31 000

Contagious Diseases—In spite of the efforts to check the spread of diphtheria in Allentown, eight new cases were reported on November 11, making a total of 125 Dr C J Hunt, associate chief medical inspector, found that cases were not properly followed up by health officers and all cases were not isolated. The reports of the health department, Harrisburg, show 11 cases of the disease reported in August, 30 in September, 95 in October and 24 so far this month ——Pittsburgh has succeeded in stamping out epidemics of small pox and diphtheria, only to be followed by one of measles, 1,500 cases of that malady having been reported to the department of health of Allegheny County up to November 14

Personal.—Dr D E Sable, police surgeon of Pittsburgh, is under treatment at the South Side Hospital for a nervous breakdown ——Dr Guy A Gerberich, Lebanon, who has been seriously ill with typhoid, is reported to be improving.——Dr W H. Robinson Pottsville is reported to be seriously ill ——Dr George R Reich and family, Marietta, have returned after a stay of several months in Bassano Canada ——Dr George W Seibert, Lebanon, who spent the summer recuperating in the Mound Valley region, has returned and resumed practice.——Dr J M Maurer, Shamokin, who has been seriously ill, is reported to be improved ——Dr Ulysses E Dornsife is reported to be ill at his home in Tunkhannock ——Dr George Romig Allentown, fractured his arm while cranking his automobile, October 28

Philadelphia

Physicians' Home Urged—At the meeting of the members of the Aid Association of the Philadelphia County Medical Society, November 11 Dr Roland G Curtin urged that steps be taken to establish a home in Philadelphia for aged and destitute physicians and their wives

Portraits Presented to the College of Physicians—At the meeting of the College of Physicians November 6 portraits of the late John H Musser Isaac Hays and Wharton Sinkler were presented to the college by Drs George A Piersol George I DeSchweinitz and James C Wilson, respectively

To Collect Criminal Statistics—The collection of statistics relating to crime in Pennsylvania is to be undertaken by the state branch of the American Institute of Criminal Law and Criminality The committee selected to prepare this report consisted of Edward Lindsey, John Lisle and Prof William I Mickle of the University of Pennsylvania

New Dispensary for Tuberculosis Opened.—The free dispensary system, being built up by the state in its fight against tuberculosis opened a new branch at 1120 South Twenty Sixth Street, for the benefit of the Woodland and Darby sections of the city This is the third branch now operating in this city and the one hundred and sixteenth to be established in the state Dr S I Repplier has been placed in charge of the new branch and will have two assistants and four nurses the latter under the direction of Miss Alice O Halloran. The dispensary will be open from 10 to 12, on Mondays, Tuesdays and Wednesdays A staff of visiting nurses will investigate conditions in patients' homes and such applicants as are found to be in need of extended treatment will be entered at the Mount Alto Sanatorium

TEXAS

New Clinic to Open.—A free surgical clinic is to be located at the Kenney Sanatorium San Antonio, the latter part of December Ten rooms of the new fifty room addition to the sanatorium will be set aside for the treatment of cases from this clinic

Medical Library Inaugurated—The Dallas County Medical Society has started a library in the Southwestern building which is open to physicians and surgeons of Dallas At present the library contains about one hundred medical journals and standard books of reference on various subjects in medicine

Hospital News—Contracts have been awarded for the erection of a fourteen room hospital for Dr R M Prather, Beeville ——Plans have been approved for the improvement and enlargement of the Temple Sanitarium to cost about $40,000 ——Plans are being considered for the remodeling of the Arlington Hotel, Marlin, and its conversion into a hospital

GENERAL

New Officers of Southern Medical Association—At the sixth annual meeting of the Southern Medical Association held in Jacksonville Fla November 12 14 the following officers were elected president Dr Frank A Jones Memphis, Tenn , vice presidents Drs Stuart McGuire, Richmond Va and J D Love, Jacksonville Fla and secretary treasurer, Dr Seale Harris, Mobile Ala Lexington, Ky , was selected as the next place of meeting

Mr Flexner with General Education Board—The General Education Board of 17 Battery Place, New York announces that Mr Abraham Flexner has become a member of its staff Mr Flexner is the author of The American College" (1908), and of the bulletins on Medical Education in the United States and Canada" (1910) and 'Medical Education in Europe' (1912) issued by the Carnegie Foundation for the Advancement of Teaching

The Congress on Mental Hygiene.—This organization which was in session during the last week at the College of the City of New York excited a great deal of interest and was not without practical results An appeal for subscriptions was made to further the plans for a nation wide educational campaign on mental hygiene which resulted in the announcement that an unnamed philanthropist would give $50 000 toward an endowment fund for the purpose provided $200 000 could be raised from other sources A large part of the hoped for endowment would be applied to the establishment of research laboratories and hospitals in various parts of the United States where investigations in regard to the causes and cure of insanity can be carried on extensively

Cholera—Reports to the U S Public Health Service and press reports indicate that cholera is present to a very serious extent in various parts of the world, the most menacing situation perhaps being in the war zone in Turkey Official information concerning the cholera is meager or absent, but the belated and imperfect press reports indicate that cases are occurring in large numbers particularly among the Turkish and Bulgarian troops in the field and fortifications near Constantinople and also among the refugees in the city of Constantinople Some newspaper reports give the number of cases occurring daily as up in the hundreds or even thousands It is also reported that the troops of the allies contain many victims of the disease On account of poorly organized medical and sanitary forces poor equipment lack of food supplies etc the epidemic may assume tremendous proportions On account of poor communication and probable suppression of news the exact conditions cannot be stated ——No cholera was reported from Italy during the past summer except at Cagliari Sardinia where about seventy cases have occurred since August 1 ——The disease is present in many places in Japan but no large outbreaks have occurred and public water supplies apparently are not infected ——The disease is also widely scattered throughout Southern Asia The Public Health Service is carefully watching the situation and taking necessary precautions to prevent the importation of the disease from Europe Reduced immigration and tran [illegible] and th [illegible] car [illegible] inspection of immigrants from [illegible] European p[illegible] before embarkation at Europ[illegible] the au[illegible]ties to keep the situation w[illegible] entrance of cholera into the

The large number of cases in the war zone, however, affords a serious focus of infection from which the disease may spread to a considerable extent throughout Southern Europe and so to the United States

Clinical Congresses—The week of November 11 was most notable in New York for medical and surgical activity In addition to the third annual session of the Congress of Clinical Surgeons of North America, many other organizations concerned with subjects pertaining to medicine and surgery held meetings The Congress of Clinical Surgeons was perhaps the largest assembly of surgeons that the world has ever witnessed, there being over 2,600 registrations The days were devoted to clinics and the evenings to scientific meetings There were as many as 180 to 190 clinics in progress and 300 to 800 operations performed daily One of the clinics most largely attended was that given by Mr W A Arbuthnot Lane of London at the new Policlinic Hospital when between four and five hundred were present in the amphitheater The clinics were so arranged that each visitor could see the most possible of the work being done in his specialty The scientific sessions were held in the ball room of the Waldorf Astoria with the exception of the Thursday evening meeting which was held in the Academy of Music, in Brooklyn, where the congress was the guest of the King's County Medical Society At the closing executive session of the congress resolutions were presented by Dr Franklin H Martin recommending that a special college of surgeons be established with power to grant a supplementary degree to the degree of medicine, which should be a fellowship in the proposed college This would be equivalent to a post graduate degree similar to the F.R C S of Great Britain Resolutions were also passed recommending a campaign of publicity on the subject of cancer of the cervix and a committee of five, consisting of Drs Thomas S Cullen, Baltimore, Howard C Taylor, New York City, C Jeff Miller, New Orleans, F F Simpson, Pittsburgh, and E C Dudley, Chicago, was appointed by the president to disseminate this information by having articles written to be published in the daily press or weekly and monthly magazines as might prove most expedient. The membership of the congress was so large that some method of limiting it to 2,000 members is under consideration The officers elected for the following year were president Dr George Emerson Brewer New York vice president, Dr W W Chipman, Montreal, general secretary, Dr Franklin H Martin Chicago, general treasurer, Dr Allen B Kanavel, Chicago, and chairman of the committeé on arrangements for 1913, Dr E Wyllys Andrews, Chicago The nominating committee recommended Chicago as the next meeting place

FOREIGN

The Red Cross at the Seat of War—The Italian Red Cross expedition from Bari consisted of ten physicians, forty nurses and 150 beds with full equipment, according to the *Policlinico* This expedition went to Montenegro and a similar expedition to Greece The Red Cross of Montenegro is collecting subscriptions to fit out an expedition, and the Italian society is also equipping at Turin a complete ambulance service to proceed at once to Montenegro The German Red Cross has equipped three expeditions and a large number of German physicians have gone from Germany to the seat of war. Drs A Dilger and A. Meyer of Heidelberg, with Professor Colmers of Coburg have gone to Bulgaria, with Drs Kirschner and Schubert From Switzerland have gone to Servia Drs Stierlin Socin and Vischer of Basel, with several Danish physicians Professor Coenen of Breslau has gone to Greece, and Drs Liebert and Hitzler have gone to Turkey The Austrian Red Cross has also sent expeditions and materials to Montenegro and Bulgaria It is stated that the officers of the Austrian society have been authorized to spend up to $40,000

LONDON LETTER

(From Our Regular Correspondent)

London, Nov 9, 1912

The National Insurance Act

The new offer of increased remuneration to the physicians by the government (described in my previous letter) is receiving the careful attention of the British Medical Association The council has issued a report to the divisions and representative body in which it is pointed out that a new situation has arisen, though many of the association's demands have not been granted With regard to the income limit of ten dollars a week for insured persons, which it will be remembered was one of the association's "six points," the regulations of the act require the surrender of the principle of central bargaining and leave to the profession in each area to obtain such an income limit as they desire and are strong enough to enforce. Another of the cardinal points is that all questions of professional discipline should be decided exclusively by a body or bodies of physicians While this demand has not been completely met an endeavor has been made to satisfy the desires of the profession while meeting the public demands for some representation of public interests on the tribunal established to hear complaints in which physicians are involved The procedure in the case of charges brought by one physician against another and of charges brought by a patient against a physician, or vice versa, is explained in the regulations The report concludes that while the proposed tribunal appears to offer a measure of security for a fair inquiry no regulations can be satisfactory which do not provide for right of appeal to a medical tribunal With regard to the amount of remuneration the government's last offer is a capitation fee of two dollars from which deduction of thirty six to fifty cents will be made for drugs while the association demands the same amount without any deduction for drugs

The British Medical Association has addressed a letter of inquiry to the Chancellor of the Exchequer, Mr Lloyd George asking him to elucidate further several points in his recent address to the insurance commissioners, embodying his last offer (reported in my previous letter) The increased services of which he spoke mean an increased service as compared with that which has been obtained in lodge practice in the past or which the great majority of the insured in view of their restricted means could not afford to obtain on private lines The standard which it is hoped that the physicians attending insured persons will reach and maintain is that which the best opinion in the profession itself would expect from a general practitioner in his ordinary work The government fully recognizes that the professional instinct of the majority of physicians will lead them without further stimulus to do all that can reasonably be expected in the interest of their patients With regard to the "modern methods of diagnosis" mentioned in his speech, the chancellor explains that physicians will not be expected to undertake work requiring skill and experience beyond that which the ordinary general practitioner can properly be expected to possess If methods of investigation beyond his scope are necessary, he will only have to advise the patient as to the steps he should take The physician will be expected to avail himself of all such facilities in the shape of expert assistance in investigations useful for proper diagnosis and treatment In so far as such facilities do not exist, the government hopes that means will be found for encouraging their development and organization in due course

A National Memorial to Lord Lister

At the Mansion House (the official residence of the Lord Mayor of London) a large and influential meeting was held for the purpose of establishing a fund for a memorial for the late Lord Lister It is proposed that this shall take the form of a medallion in Westminster Abbey, a monument in the metropolis and an international Lister Memorial Fund for the advancement of surgery The Lord Mayor presided and there were present some of the most eminent men in science (Lord Avebury, Sir Archibald Geikie, *president of the Royal Society*) in medicine (Sir Rickman Godlee, president of the Royal College of Surgeons, Sir Thomas Barlow, president of the Royal College of Physicians, Sir Francis Champneys, president of the Royal Society of Medicine, Professor Saundby Sir William Osler, and Prof Howard Marsh), and in politics (Lord Haldane, the Lord Chancellor and Lord Cromer)

The Automobile Death Roll

The automobile peril described in a previous letter to The Journal continues to exercise the public and has led to questions in the House of Commons Recent figures show that up to Oct 7, 1912, 118 people were killed in the streets of London this year On one day, September 19, as many as four persons were killed Replying to a question, Mr M'Kenna, the Home Secretary, said that if, as a result of coroners' inquiries, criminal negligence were proved, proceedings would be taken It was pointed out that at coroners inquests the motor bus companies were always represented by lawyers, whereas the relatives of the persons killed were generally too poor to be legally represented He said that the public has the protection of the coroner and jury When asked why motor vehicles were permitted to travel in the streets at excessive speed, seeing that the law provides that no motor vehicle should travel at a speed dangerous to the public, he replied that, in 1911, 893 drivers of motor cabs or omnibuses and 3,556 drivers of other motor vehicles were prosecuted in London for dangerous driving and that he was issuing instructions for the more stringent punishment of dangerous, negligent and reckless driving

Maternity Benefit in Australia

The Federal Senate of the Australian Commonwealth has passed the third reading of a bill providing for the payment of a bonus up to a maximum of $25 in respect of every child born in Australia of white parentage The payment has already begun This sum is much greater than the maternity benefit in the old country provided for by the national insurance act, which amounts to only $7 50, but it must be borne in mind that here the purchasing power of money is much greater than in Australia

Death Under Stovain

A man, aged 68, has died under spinal anesthesia induced by injection of stovain for an abdominal operation at St Thomas' Hospital After the operation had been satisfactorily performed his breathing became shallow, and although artificial respiration was resorted to and the heart was massaged, death took place in a few minutes At the inquest the anesthetist explained that he had administered stovain in 350 cases and that this was the first patient he had lost

PARIS LETTER

(From Our Regular Correspondent)

Paris, Nov 1, 1912

Personal

Dr Bégouin, *agrégé*, has succeeded Professor Chavannaz as professor of clinical gynecology at the Faculté de médecine of Bordeaux

The death is announced of Dr Henri Dor, aged 78 Dr Dor was born at Vevey, Switzerland, and had been professor of ophthalmology at the Faculté de médecine at Berne In 1876 he went to Lyons where he founded an independent eye clinic and the *Revue générale d'ophthalmologie*

Dr Paul Segond, professor of clinical surgery at the Faculté de médecine de Paris, has died of uremia at the age of 61 Dr Segond was the son of Dr L A Segond He received his medical degree in 1880 and three years later became *agrégé* of surgery and surgeon of the hospitals of Paris In 1905 he obtained the chair of operative medicine and in 1907 he was named professor of clinical surgery, succeeding Professor Terrier Since 1909 he had been a member of the Académie de médecine and last year was president of the Congres français de chirurgie Paul Segond wrote little but he possessed rare qualities as a surgeon He had specialized in gynecologic surgery and through his facility in vaginal operations had perfected considerably the removal of uterine fibromas through the vagina

Annual Meeting of the French Surgical Society

The twenty fifth meeting of the Association française de chirurgie was held in Paris, October 7 12, with Professor Delorme, medical inspector general of the army health service president The meetings of the congress as usual were well attended not only by French surgeons but by surgeons from abroad

PRACTICE OF SURGERY IN WAR

In his opening address the president regretted that no place is now given by the society, as formerly, to the subject of surgery in war He gave a summary of present practice, which in some respects differs from ordinary surgery as has been clearly shown in recent wars One of the clearest examples is laparotomy in wounds of the abdomen by small projectiles In the South African war leading surgeons were sent by the British government to the field of battle and they were surprised at the treatment of these wounds Spontaneous healing was permitted systematically instead of direct intervention Operations were done with the same care and skill as in hospitals in large cities, but the mortality among those operated on was greater than among those who were not operated on after being wounded This was the experience in Cuba and in Manchuria, and can readily be accounted for It is not possible to have the same mastery over conditions on the battle field that one can have in a regular hospital and an abdominal wound by a bullet from a distance is not so severe as one from the muzzle of a revolver, finally in adding a new traumatism to one which already exists the surgeon interferes with spontaneous encapsulation and is liable to spread infection

Surgery in war should have simplicity as its end Delorme although he believes in intervention at once in cases of severe wounds of the abdomen lungs or heart as a general rule nevertheless considers that in war intervention is contra indicated

DIAGNOSIS AND TREATMENT OF CICATRICIAL STENOSIS OF THE ESOPHAGUS

There was an interesting discussion as to the relative value in diagnosis of skiagraphic and fluoroscopic examination compared with esophagoscopy According to Dr Cuisez of Paris the Roentgen rays give two kinds of information with the use of bismuth wafers they show the location of the trouble and with bismuth lactate they show the form and size of the stenosis The fault of the rays is that they do not show the nature of the stenosis Esophagoscopy alone can do this As to treatment one obtains the impression on reading the literature that when catheterization is impossible in the usual way surgeons resort to severe operations which could have been avoided if they had tried dilatation with esophagoscopy which according to Cuisez succeeds in 95 per cent of cases and when ordinary catheterization is impossible catheterization from below should be employed through a large opening in the stomach Dr Moure of Bordeaux believes that in careful hands simple methods usually give good results but in severe cases one should not wait too long before making a stomach opening for gastrostomy often permits catheterization and dilatation from below at the same time saving the patient from death by inanition According to Dr Depage of Brussels, retrograde dilatation is one of the best methods provided that the stomach opening is large Professor Forgue of Montpellier emphasized the usefulness of gastrostomy, as there are many constrictions impassable until gastrostomy has been done Dr Delagenière of Mans also expressed the opinion that the stomach operation has great importance Under certain conditions it is enough to open the stomach, permitting complete relaxation of the esophagus to overcome the stenosis Professor Villar of Bordeaux, who described the first esophagostomy by the posterior mediastinal route in 1802 is of the opinion now that this is an operation to be avoided In fact severe operations for impassable stenosis ought to be discarded in favor of gastrostomy According to Dr Berard of Lyons one should always begin in examining a patient by fluoroscopy and skiagraphy for no matter how desirable esophagoscopy is there are times when it cannot be done This likewise was the opinion expressed by Professor Roux of Lausanne according to whom it is easier for an ordinary practitioner to open the stomach than to employ the methods of the specialists Dr Moure although a specialist, was unwilling to say that esophagoscopy is a panacea, because failures have been attendant on its use and even death has been caused

EXAMINATION BY ROENTGEN RAYS IN SURGICAL AFFECTIONS OF THE STOMACH AND INTESTINES

Drs Béclère of Paris and Mériel of Toulouse said that examination by Roentgen rays of the stomach and the intestine is the best method for showing the location the relations the form the dimensions and the muscular functions of a large part of the alimentary tract Latent ulcers are thus shown beginning stenoses and tumors which ordinarily escape palpation To clinical examination the Roentgen rays bring an element of exactness in the diagnosis of lesions taking the place of exploratory laparotomy and by permitting earlier intervention they make surgical success possible in more cases with more lasting cures Nevertheless Professor de Quervain of Basel has shown the mistakes to which a Roentgen ray examination may lead and has pointed out that this method has not superseded the clinical examination for a simple examination with one or two hands often corrects errors which would have been made had the evidence of the rays alone been depended on In regard to the stomach, for instance exaggerated peristalsis usually an indication of organic pyloric stenosis may be simulated by involuntary contractions of the stomach such as are found in tabes Ulcers and cancer located high near the cardia escape ordinary investigation although it is easy to demonstrate them if the patient is placed in the right lateral decubitus or in a slanting position with the head low The defective image of the pyloric region the most important sign of cancer here often results from insufficient emptying of the stomach before the test is made In cases of doubt examination in the right lateral position is an important adjunct In other cases the defective image is clearly indicative of a tumor of the kidney spleen intestine pancreas or one starting from the gall bladder As for the large intestine diagrams are often more difficult to interpret than those of the stomach and it is not advisable to depend too much on bismuth injection for determining the form and the position of the large intestine The method of choice is the administration of bismuth by way of the stomach with examination after from eight to twenty

Dr. Robert Fields Library
C. M. C. Medical College

four hours Numerous mistakes are made in the diagnosis of stenosis The tapering form of the fecal mass, so frequent as a rule in the lower part of the colon, should not be interpreted as a sign of stenosis unless it recurs regularly in several skiagrams at the same place Dr Girard of Geneva calls attention to toxic symptoms following the use of bismuth subnitrate in skiagraphy He prefers to use zirconium oxid although its opacity is a little less than that of bismuth Barium sulphate recently has caused severe symptoms probably on account of impurities Professor Hartmann of Paris is of the opinion that the stomach does not have the exact position which skiagrams indicate He advises interpreting them with careful attention to anatomy, for every surgeon knows that in some wounds of the abdomen in which the intestine alone is involved, the stomach also would have had to be wounded if it were as low as the skiagram shows it to be. It is probable that the weight of the bismuth has an effect. In intestinal work, Hartmann prefers fluoroscopy, but it is necessary here to be on one's guard against intestinal contractions which under the influence of bismuth simulate a stenosis which does not exist Bismuth should be taken by the mouth and examinations should be made at half hour intervals that its retardation or stopping may be observed Bismuth injection should not be used excepting for affections located low in the pelvic colon

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Nov 2, 1912.

Clinical Position of So Called Genuine Epilepsy

At the annual meeting of the German Neurologic Association, recently held at Heidelberg, the still unsolved question of the existence of genuine epilepsy was discussed by the distinguished investigators Professor Redlich of Vienna and Binswanger of Jena According to Redlich, true epilepsy, in the ordinary sense, cannot be etiologically distinctly defined, at the most, an artificial boundary line can be drawn in this way Neither does the form of attacks give any certain indication for the separation of genuine from organic epilepsy Paralytic phenomena after the attacks, or symptoms of defective brain action in the intervals are more frequent and more intense in organic epilepsy, but occur also in the ordinary epilepsy Permanent indications of mental defects (epileptic dementia) are very common in ordinary epilepsy, but may be absent, they also occur, on the other hand in organic epilepsy if it had its beginning in childhood or youth In the organic epilepsy there are found, in addition to the focal affections, diffuse changes, which may also occur in so called genuine epilepsy This disease also has a pathologic anatomy, and there are transitions between the two forms The best plan is to drop altogether the name genuine epilepsy" and for the present to define only the chronic form of epilepsy Opposed to this there is acute epilepsy and cases of occasional epileptic attacks The latter have a variable significance In part of the cases there is possibility of a transition to chronic epilepsy It is important in future to study the individual predisposition to epilepsy originating under different conditions from the varying capacity of the brain for the epileptic reaction and to study the pathogenic conditions under which the epileptic seizure develops In this way, actual insight into the pathology of epilepsy might be obtained

THEORIES OF EPILEPSY

According to Binswanger, the clinical position of so called genuine epilepsy affords at present opportunity for only a difficult and incomplete discussion There are two directions in which the conception of "epilepsy' is progressing The one is concerned almost exclusively with an anatomic and etiologic demonstration, and has established the view that the entire field of epilepsy must be separated from the functional neuroses and be classed with the organic diseases of the brain The other direction retains the clinico symptomatologic conception According to the first view the pathologic process in epilepsy is a chronic progressive one, which is manifested less in the seizures than in the various symptoms which occur during the intervals and in the progressive mental decay Certain clinical facts however, do not harmonize with this conception Only part of the cases follow the chronic progressive course with mental deterioration (epileptic dementia) Further, there is a group in which a mental change without doubt occurs which however does not consist in a deficiency of the mental processes, but in a peculiar change of character These psychopathologic manifestations are sometimes stationary sometimes they are subject to considerable variations, and occasionally they completely disappear In the latter case it can generally be established that they were directly related to the paroxysmal pathologic condition

Then there is a form of epilepsy, hitherto underestimated in its frequency and importance, which aside from the epileptic paroxysm or its equivalent, affords no evidence of any sort of psychic abnormality This group includes people who rank intellectually very high The majority of those so afflicted carry on their business and show no retrogression of their mental powers up to an advanced age. Further there are epileptics without dementia who may be regarded as having entirely recovered According to Binswanger's own experience the number of these is even greater than has been estimated Quite natural reasons (the disinclination of the patients to speak of their previous affection) make it difficult for us to obtain an exact numerical insight into this important question

Considering the above clinical facts, the other theory of epilepsy regards the epileptic convulsive paroxysm as the most important in the clinical picture, and classifies under this disease only those cases in which at some period of life genuine epileptic seizures have occurred Simple as this classification may be in the majority of cases of epilepsy, it is very difficult in the borderland cases The groups of psycho asthenic convulsions, of frequent slight attacks of narcolepsy, and emotional brain storms surely, in the majority of cases, do not belong to this conception of epilepsy

ANATOMIC BASES OF EPILEPSY

The adherents of the purely anatomic epilepsy base their views almost exclusively on the investigations of Alzheimer, who has shown that in about 40 per cent of all cases of genuine epilepsy there is a peculiar pathologic anatomic lesion, which should be designated as Alzheimer's gliosis It affects the most superficial layers of the cortex, and particularly the cortical layer of the spinal cord and the layer of the small pyramidal cells It is characterized by the fact that the increased gliomatous tissues to a certain extent fit into the architecture of the cerebral cortex Alzheimer considers the defects of tissues and the consequent epileptic dementia as a result of the epileptic seizures, a conception which Binswanger has advocated for years Accepting these data, one is justified in retaining the anatomic-etiologic group of epilepsy of organic origin, to which only those cases should be added in which macroscopic and microscopic recognizable lesions of the brain have caused the epileptic affection These are in particular retarded development, such as diffuse lobar and focal sclerosis, fetal and post fetal inflammatory degenerative processes, and acute focal affections of the nature of infectious encephalitis They all may lead to idiocy and imbecility with epilepsy, or to cerebral infantile paralysis with epilepsy Still, epilepsy may occur as a result of focal lesions due to acute infectious encephalitis, without retarded mental development

The anatomic bases of the epilepsy may be disclosed in some of the cases by the peculiar way in which the epilepsy develops or by distinct symptoms in the intervals and after the paroxysms In other cases the infectious encephalitic affection remains completely concealed during life Under organic epilepsy, according to the clinical etiologic point of view, may be included the toxic, traumatic, chronic infectious and arteriosclerotic epilepsies But even in these groups anatomic changes may be recognized, which certainly have some influence on the development, as in traumatic epilepsy A sharp separation of organic epilepsy is consequently, as a general rule, impracticable Only one group is left, that in which the epileptic disease has developed on the basis of a hereditary and congenital predisposition, or one acquired in early childhood without external cause In some cases the conditions of the origin of this constitutional form of epilepsy are still entirely unknown Yet, certain microscopically demonstrated hypoplasias of the brain permit the conclusion that in these constitutional forms finer morphologic defects in development play a rôle Moreover, it is very probable that the sclerosis of the cornu ammonis, which is found in 50 per cent of the cases of genuine epilepsy, belongs in this group of primary hypoplastic pathologic processes

DISTURBANCES OF A DYNAMIC FORM

There still remains a group of uncertain etiology, which may, for the present, be designated as a purely dynamic form This term is based on the assumption that the epileptic pathologic process, which Nothnagel called the "epileptic transformation" depends on a disturbance of the dynamic equilibrium of the central nervous system, a pathologic counteraction of exciting and inhibiting processes within the functioning organs These disturbances of dynamic equilibrium lead to the epileptic paroxysm, which in the sense of Jackson and Gowers may still be regarded as a process of discharge of a condition of extreme tension These dynamic disturbances, which in the completely developed epileptic convulsive attacks set in motion a peculiar epileptic mechanism, and in the incomplete attacks only a part of the same, may be, moreover, caused by the most various injurious influences, acting as a rule in a chronic manner, sometimes by circumscribed, more or less extensive foci either within or outside of the brain and sometimes by toxic or general traumatic injuries which occasion this specific transformation by means of chemical disturbances of nutrition within the functioning cortical substance Thus it is explained that in spite of the most various causes a disease can develop which with regard to its origin and course presents the most manifold individual variations, but on account of the common faculty of characteristic paroxysmal symptoms may even to day be regarded as a clinical entity

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Oct 20, 1912

The Program of Medical Lectures at the Vienna University, 1912 1913

In the winter term of the Vienna medical school there will be given 408 different lectures and classes for students and postgraduates, eleven more than last year The number of lecturers is also high, there being thirty two ordinary professors ninety four extraordinary professors, and 152 privat docents and assistants It is interesting to see how these numbers are divided among the various branches of our art There will be given four classes in history of medicine (which of late has become a favorite study here), twelve in histology and anatomy, fourteen in physiology, thirteen in medical chemistry, thirty six in pathology and pathologic anatomy, eleven in materia medica, 102 in internal medicine, nineteen in laryngo rhinology, nineteen in pediatrics, thirty nine in surgery, eleven in dentistry, thirty two in otology, thirty one in ophthalmology, forty two in gynecology and obstetrics, forty two in dermatology, including syphilis, twenty four in psychic medicine and seventeen in forensic, social and hygienic medicine The increase in classes for specialists in otology rhinology and laryngology is notable in late years The number of regular students at the medical school during the last (summer) term was 2,057, against 1,880 during the preceding summer term among them were 125 women (ninety eight in the corresponding period of 1911) The constant increase of medical students during the last twelve years is noted, and is stronger than the increase of the population in this country On the other hand, on account of the present war which requires military service from all able bodied men in the Balkan States, we expect for the coming term a much smaller number of students from those countries Otherwise, we would again encounter the usual difficulties of accommodating all those desiring to work in our medical and scientific institutions, which have led to energetic protests on the part of students against the government's parsimony in this particular branch

Honors to Professor Kassowitz

The well known specialist for diseases of children, Professor Kassowitz, recently celebrated his seventieth birthday and was the recipient of numerous honors on this occasion The official congratulation took place at the meeting of the pediatric section of the Medical Society of Vienna when the Faculty of Medicine the Senate of the University, the Hungarian Society of Physicians and numerous corporations tendered their congratulations by delegates A *Festschrift* was published in honor of the scientist who on this occasion delivered a most interesting lecture on "Facts and Theories and Their Influence on Natural Science and Medicine" He emphasized the necessity of being on the lookout for unverified popular theories Professor Kassowitz is also at the head of the anti alcohol movement in this country

An Annex to the Anatomic Institute

The number of students who can be accommodated in the anatomic institutes of Vienna is altogether out of proportion to the number who apply for admission The government has hitherto paid no attention to the demands of the medical faculty and the students who asked for new facilities but now has granted an appropriation for a third anatomic theater capable of holding like the present two 250 students making a total capacity for 750 students In one or two years the institute will be enlarged by adding a large museum and laboratory hall At a meeting of students the addition of the two dissecting rooms was declared insufficient and the erection of an appropriately large institute was urgently demanded •

Marriages

WILLIAM HENRY BEARDSLEY M D Springfield Mass to Miss Anna Jackson Harkness of Springfield Vt October 29

FREDERICK N HENDERSON M D Rockville Md., to Miss Gussie Glenn Lamar at Memphis Tenn., November 3

HENRY DAWSON FURNISS, M D, New York City to Miss Ruth Kellogg Pine of Troy, N Y November 18

WILLIAM EDWARD HARTIGAN M.D to Miss Gertrude Gladding both of Norwich N Y November 7

ALFRED LAWRENCE RHOADS M D Scranton, Pa to Miss Lou Engles of Stroudsburg Pa, November 12

ROBERT PAGE COOK M D Front Royal Va to Miss Nellie V Jones, at Front Royal November 2

EDWARD HARRIS GOODMAN M D Philadelphia to Miss May Dudley of Camden N J, November 9

JAMES ALEXANDER CRAIG M D, Cary, Ind, to Miss Mary Arnold of Lebanon Pa, November 12

ROBERT LEWIS RHODES, M D Roanoke, Va, to Miss Margaret Farmer of Louisville, Ga, October 25

BENJAMIN FRANKLIN SAYLOR M D, Redding Cal, to Miss Alice Taylor of St Louis November 7

GEORGE RINEHART M D, Cassville, W Va to Miss Lena Grace Core at Cassville, November 8

JUDSON E HAIR M D to Miss Ivy J Kinney, both of Baltimore in Philadelphia, October 23

ABRAHAM POTASNIC, M D, Meridian, Miss, to Miss Dora Cohen of Milton, Fla October 6

JACKSON R CAMPBELL, M D, to Miss Mary Anderson, both of New York City, November 7

THOMAS RODNEY CHAMBERS M D, to Miss Martha V Sisson both of Baltimore, November 6

JUDSON TEETER M D to Miss H Elizabeth Seng, both of Pleasant Hill O, November 10

WESLEY HARTMAN RENNIE M D, U S Navy, to Miss Lita Jaques of Chicago, November 7

FRANK K ROY, M D Clarence, Mo, to Miss Pearl Keller of Kansas City Mo November 2

HARRY JAMES HOAG M.D to Miss Elizabeth Dunn, both of Mora, N Mex, September 25

FRANK ASBURY OSINCUP, M D, to Miss Mary Wodring, both of Waverly Ia November 7

GEORGE B FLETCHER M D, Lonoke, Ark, to Miss Vera Blood of Grayville Ill October 23

WILSON J FERGUSON, M D, to Miss Willa Burke, both of Sedalia Mo October 31

WILLIAM FRY, M D to Miss Ruby I Thompson, both of Baltimore October 26

JOSEPH C FRIEDMAN M D, to Miss Beatrice Shaffner both of Chicago, November 12

Deaths

John William Mallet, M D Tulane University New Orleans 1868 a member of the Medical Society of Virginia and a chemist of distinction died at his home in Charlottesville November 7 from pulmonary embolism aged 80 He was graduated from the University of Dublin in 18[illegible]3 and a year later became assistant professor of analytical chemistry at Amherst (Mass) College and from 1855 to 1860 he was professor of chemistry in the University of Alabama Mobile During the Civil War he served in the Confederate service and was in charge of the ordnance laboratories At the close of the war he was made professor of chemistry in the University of Louisiana and later professor of analytical industrial and agricultural chemistry at the University of Virginia active from 1872 until 1908 and professor emeritus in [illegible] that time Dr Mallet had also served at various times as professor or lecturer at Johns Hopkins University Baltimore the University of Texas Galveston and Jeff[illegible] M[illegible] College and for three terms was a member [illegible] at [illegible] Commission He had been hon[illegible] the University of Göttingen [illegible] and Mary College, the University of Mississippi, Princeton University, Johns Hopkins University and the University of Pennsylvania Dr Mallet was a frequent contributor to the chemical literature, he was a member of scientific bodies at home and abroad and was one of the most distinguished chemists of the United States

Robert Fletcher, M D M R C S, England, 1844, principal assistant librarian in the library of the surgeon general's office, Washington, D C, since 1886, died in his apartment in Washington, November 8, aged 89 Dr Fletcher was born in Bristol, England, March 3, 1823 He served throughout the Civil War, first as surgeon of the First Ohio Volunteer Infantry, then successively as assistant surgeon, and surgeon, U S V, and was mustered out in 1867 He was a member of the American Medical Association, Medical Society of the District of Columbia, National Geographic Society Philadelphia College of Physicians and other learned societies In 1910 Dr Fletcher was awarded the gold medal of the Royal College of Surgeons of England in recognition of his distinguished services in connection with the indexing of the catalogue of the Surgeon General's Library He was lecturer on medical jurisprudence from 1884 to 1886 and professor from 1886 to 1888 in the Columbian University, Washington, and later was lecturer on forensic medicine in Johns Hopkins University He was a frequent contributor to the literature of the history of medicine and anthropology

Franklin Buchanan Smith, M D University of Pennsylvania, Philadelphia, 1878, a member of the American Medical Association, once president of the Medical and Chirurgical Faculty of Maryland, and for several terms president of the Frederick County Medical Association, first health officer of Frederick City and County, Md, a member of the State Board of Medical Examiners since its organization in 1892, for ten years a member of the local U S Pension Examining Board, for eight years physician to Montevue Hospital, and for more than twenty years local surgeon of the Baltimore and Ohio and Pennsylvania systems, died at his home in Frederick, November 5, from typhoid fever, aged 56

Bradford S Galloway, M D University of Michigan, Ann Arbor, 1880, for twenty three years a practitioner of Leadville, Colo, chief surgeon of the Colorado Midland Railway for three years and local surgeon for the Colorado Southern Railway for twenty years who moved in 1901 to Denver and two years later to Goldfield, Nev, and had been for four years a resident of Los Angeles, died suddenly in a restaurant in that city, November 2, from embolism, aged 58

John Denham Palmer, M D University of Maryland, Baltimore 1872, of Jacksonville, Fla, a member of the Florida Medical Association formerly chief surgeon of the F, E and P Railroad, who took a prominent part in the yellow fever epidemics in Memphis, Tenn and Fernandina and Jacksonville, Fla, died in St Luke's Hospital, Jacksonville, from the effects of an accidental gunshot wound, November 3, aged 62

John T Mitchell, M D Jefferson Medical College, 1880, a member of the Missouri State Medical Association, for twenty five years a practitioner of Kansas City, professor of anatomy in the Western Dental College and lecturer in the Kansas City School of Pharmacy, died in St Luke's Hospital, Kansas City, November 4, from pneumonia, aged 65

James Stuart Dickey, M.D Queens University, Belfast, Ire, 1910, senior demonstrator of anatomy in his alma mater, professor of anatomy in the Western University, London, Ont, committed suicide in the pathologic laboratory of that institution September 21 by gas asphyxiation while suffering from melancholia, aged 30

Lucius Wadsworth Clarke, M D University of Vermont, Burlington, 1863 assistant surgeon of the Thirteenth Connecticut Volunteer Infantry until the close of the Civil War, for forty six years a practitioner of Cambridge Wis, and for two years president of the village, died at his home, November 3, from senile debility aged 81

John Thomas Duncan, M.D University of Toronto, Ont, 1882, of Toronto, for many years lecturer in anatomy at the Medical College for Women and oculist to the Western Hospital, who retired from practice about six months ago on account of bronchitis, died in California, November 4, aged 59

Lewis John Davis, M D University and Bellevue Hospital Medical College, 1899 of Watertown N Y, was found dead in his room in the Hotel Marlborough New York City, November 4, it is believed from the effects of an overdose of morphin, aged 45

William H Robinson, M D University of Pennsylvania, Philadelphia, 1868, for several years visiting physician to the Pottsville Hospital, a member and for several years president of the Pottsville City Council secretary of the Board of Health, and registrar of the State Department of Health, died at his home, November 4, from disease of the kidney

Lynn Boyd Graddy, M D University of Nashville Tenn, 1874, once president of the Tennessee State Medical Association and Nashville Academy of Medicine, for twelve years professor of diseases of eye, ear, nose and throat in his alma mater, from 1884 to 1888 a resident of Omaha, died at his home in Lexington, Tenn, November 11, aged 67

Louis S J Gessner, M D University of Heidelberg, Germany, 1858, assistant surgeon of the Thirty Seventh Ohio Volunteer Infantry during the Civil War, a pioneer practitioner of Sandusky County, O, died at the home of his daughter in Fremont November 4, from paralysis, aged 82

Walter Henry White, M D Boston University School of Medicine, 1882, a member of the American Medical Association, formerly president of the American Electro Therapeutic Association and associate editor of *Advanced Therapeutics*, died at his home in Boston, about November 6, aged 66

Marietta Huntington Crane Woodruff, M.D New York Medical College and Hospital for Women, New York City, 1874, one of the first women to practice medicine in New Jersey, died at her home in Boonton, November 6, from hemorrhage following an attack of coughing, aged 75

Randolph Littrell Collins, M D Medical College of Virginia, Richmond 1910, of Woodlawn Va, a member of the American Medical Association, died in the University Hospital, Richmond November 3, from peritonitis following an operation performed several days before, aged 25

Benjamin F W Urban, M D University of Pennsylvania, Philadelphia, 1869, court crier of Court No 2, Lancaster, Pa, clerk of the Quarter Sessions Court for two terms, a veteran of the Civil War, died at his home in Lancaster, November 3, from angina pectoris aged 66

Claudius Galen Treichler, M D University of Pennsylvania, Philadelphia, 1865 a member of the American Medical Association and a fellow of the American Academy of Medicine, died at his home in Honeybrook, Pa, November 2, from heart disease, aged 72

John Eugene Monroe, M D Cleveland University of Medicine and Surgery 1893, for nineteen years a practitioner of Orange, Mass, died in the Memorial Hospital, Worcester, Mass, November 5, after an operation for the removal of carbuncle aged 53

Frank Lincoln Hamilton, M.D University of Pennsylvania, Philadelphia 1893, a member of the Medical Society of the State of Pennsylvania and for eighteen years a practitioner of Chester, died at his home, November 4, from cerebral hemorrhage, aged 47

Charles C Knapp, M.D University of Tennessee, Nashville, 1893 a member of the American Medical Association and a specialist on diseases of the eye, died at his home in Zanesville, O, November 5 from cerebral hemorrhage, aged 48

Thomas Benton Marquis, M D Bellevue Hospital Medical College, 1877, since 1882 president of the local board of pension examining surgeons of Lisbon, O, died at his home, November 5, from uremia, following pneumonia, aged 58

Clarence Albert Baker, M D College of Physicians and Surgeons, New York City, 1886, health officer of the town of Brookhaven and physician of Suffolk County, died at his home in Yaphank, L I, New York, November 8, aged 50

Emory Strickler, M D Eclectic Medical Institute, Cincinnati, 1865, first superintendent of Schools of Harrison County, Va, a veteran of the Civil War, died at his home in Shinnston, W Va, October 25, from senile debility, aged 84

Leo H O'Meara, C M, M D Queens University, Kingston, Ont, 1911, formerly of Fallowfield and Ottawa, Ont, surgeon to the Algoma Central and Hudson Bay Railroad, was accidentally drowned at Hobon, Ont, November 2

Andrew Thomas Brenton (license, Iowa, 1887), an early practitioner of Sac City Ia, but for a few years past a resident of Florida, died at the home of his son in Havelock, Ia, October 26, from cerebral hemorrhage, aged 69

William Marmaduke Owen (license Jefferson County, Ala, 1887), a Confederate veteran and for forty years a practitioner of Texas, and Jonesboro, Ala, died at the home of his son in Dora, Ala., November 5, aged 77

Willard P Brickley, M D American Medical College, Cincinnati, 1856, one of the founders of the Physio Medical College of Indiana, Indianapolis, a resident of Madison County, Ind, for seventy years, died at his home in Anderson, November 10, aged 89

Homer Simpson Bell, M D Dartmouth Medical School, Hanover, N H, 1873, for many years a practitioner and town clerk of Granby, Mass, died at his home in Springfield, Mass, November 3, from diabetes, aged 61

Jacob Ellsworth Ernest, M.D Jefferson Medical College, 1892, formerly of Williamsburg, Pa, but since 1896 a practitioner of Johnstown, Pa, died in the Johnstown City Hospital, November 1, aged 48

Marion Francis Shaw, M D Bellevue Hospital Medical College, 1884, formerly health officer of Hood River County, Ore, died on his ranch near Hood River, October 31, from heart disease, aged 54

David Henry Agan, M D Bellevue Hospital Medical College, 1879, a member of the Medical Society of the State of New York, died at his home in New York City, November 6, aged 64

Joseph E Fopeano, M D Long Island College Hospital, Brooklyn, N Y, 1889, a member of the Medical Society of New Jersey, died at his home in Hoboken, October 4, aged 56

Thomas Stanhope Henry, M D Medical College of Virginia, Richmond, 1866, of Brookneal, Va, died November 11, at the ancestral home of the Henry family, Red Hill, Va, aged 80

Andrew H Diven (license, Oregon, 1889), a practitioner of Pennsylvania from 1861 to 1889 and thereafter a resident of Portland, Ore, died at his home, October 30, aged 76

William H Dorsey, M D Georgia College of Eclectic Medicine and Surgery, Atlanta, 1897, died at his home in Griffin, Ga, October 26, from cerebral hemorrhage, aged 42

Simeon G Story, M D University of Toronto, Ont, 1893, one of the best known practitioners of Kent County, Ont, died at his home in Blenheim, November 4, aged 47

Henri Riedelle Thayer (license, Mass, act of 1894) for thirty five years a resident of Boston, died at his home, November 1, from senile debility, aged 93

James Edward Gregory, M D Illinois Medical College Chicago, 1905, a colored practitioner of Gainesville, Tex, died at his home November 7, from pneumonia

Edgar DuBois Biddle, M D Missouri Medical College, St Louis, 1880, of Patoka, Ind, died in a hospital in Chicago, November 7, from paralysis aged 55

Elwood MacDonald Blakely, M D Manitoba Medical College Winnipeg, 1907, was found dead in his office in Elm Creek, Man, about October 31, aged 30

Raymond Albert Young, M D University of Michigan, Ann Arbor, 1909, died at the home of his parents in Grand Rapids, Mich, November 2, aged 26

Henry George Small, M D College of Physicians and Surgeons, New York City, 1875, died at his home in Brooklyn, N Y, November 8 aged 60

Edmund H Packer, M D Homeopathic Medical College of Pennsylvania, Philadelphia, 1867, died at his home in Lowell, Mass, October 10, aged 68

William A. Edwards, M D Physio Medical College of Indiana, Indianapolis, 1898, died at his home in New Douglas, Ill, October 22, aged 41

William W Jones, M D Eclectic Medical Institute, Cincinnati 1881, died at his home in Utica, N Y, November 8, from nephritis aged 55

Joseph Pfeiffer, M.D University of Giessen Germany, 1853 died at his home in New York City, October 31, from senile debility, aged 85

Almond A Stuart (license Indiana 1897) was shot and killed in the door yard of his home at Fortville, Ind November 7, aged 68

Joseph W Kitten, M D Jenner Medical College Chicago 1906 died at his home in Chicago, November 2, from pneumonia aged 44

William Commons, M.D Medical College of Ohio Cincinnati 1863, died at his home in Union City Ind, October 27 aged 76

W C Ashley, M D Atlanta (Ga) Medical College 1884 died at his home in Ocilla, Ga, November 9, from nephritis

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

DUFFY'S MALT WHISKEY

"Patent Medicine" or Poor Liquor—Which?

What is this widely advertised fraud sold as a consumption cure,' claimed to be the 'greatest known heart tonic and a preparation that 'builds up the nerve tissues tones up the heart gives strength and elasticity to the muscles and richness to the blood?" The answer to this question will be found to depend, apparently, on when it is asked

During the Spanish American war Duffy's Malt Whiskey qualified as a "patent medicine" by the payment of the special tax that was put on nostrums as a means of raising revenue In a circular issued at that time by the Treasury Department it was stated

> The Duffy Malt Whiskey Company have by evidence under oath filed in this office shown that their compound called Duffy's Pure Malt Whiskey is composed of distilled spirits in combination with drugs

On the other hand, even while the Federal Government was declaring the stuff a 'medicine," the Supreme Court of the state of New York decided that Duffy's Malt Whiskey was not a medicine but a liquor and that persons selling it would be required to pay the same excise tax and to procure the same liquor tax certificate that were required of the sellers of any other whiskey The way in which the New York courts came to pass on this question is an interesting chapter in patent medicine" history

THE PAXSON CASE

A New York City druggist named Paxson sold Duffy's Malt Whiskey without first having paid the liquor license The New York state excise department proceeded against the druggist for so doing Paxson's defense was that Duffy's Malt Whiskey was not a liquor but a medicine and it was, therefore, not subject to the liquor laws of the state of New York When the case came to trial the New York authorities called as witnesses three chemists Dr Joseph De Cuebucc, Dr Charles A Crampton and Dr Edward W Wheeler

WHAT THE CHEMISTS FOUND

Dr De Guebucc, who at that time was chief chemist in the Health Department of the City of New York testified that he had analyzed Duffy's Malt Whiskey and he reported in part

> I found the contents of the bottle to be whiskey with a little cane sugar added to it a sweetened whiskey I found no other ingredients My examination would have revealed any other ingredients present in quantities sufficient to be determined by chemical analysis '

Dr Crampton, the chief chemist of the Internal Revenue Bureau of the Treasury Department in Washington, reported his results in part as follows

> I have made an examination of the substance known as Duffy's Malt Whiskey I found it contained no medicinal ingredients outside of the alcohol in the whiskey It is whiskey of a very poor quality as a beverage it is not whiskey which according to the pharmacopeial standard has been aged The taste of this bottle is indicative of a rather poor quality of whiskey what is known as young whiskey or raw whiskey it has not the full flavor and aroma of an aged whiskey

Dr Wheeler a chemist of the New York state Department of Agriculture testified that he had analyzed Duffy's Malt Whiskey

> In my opinion there is no appreciable drug or medicine in Duffy's Malt Whiskey Th [illegible]

cent of solids in the bottle which I analyzed The solid was largely sugar There was coloring matter"

WHAT THE DUFFY PEOPLE CLAIMED

The courts assessed against Paxson a judgment of more than $700 Paxson then appealed the case to the New York Supreme Court, which refused to set the judgment aside and assessed him further costs for the refusal Then the Duffy Malt Whiskey people showed their hand They took up the matter and a motion for a new trial was argued on the ground that new and important evidence had been found In affidavits submitted by the Duffy Malt Whiskey Company, Clarence E Sherin, *president of the concern, declared that* Duffy's Malt Whiskey contained, in addition to alcohol, the following drugs

Fluid extract calumba (columbo)
Fluid extract hydrastis (golden seal)
Fluid extract pareira (Pareira Brava)
Fluid extract taraxacum (dandelion)

Dr Richard Curran, Rochester, N Y, declared under oath

> That he personally prepares the tincture made from the following drugs, viz Fluid Extract Calumba (Columbo) Fluid Extract Hydrastis (Golden Seal) Fluid Extract Pareira (Pareira Brava) Fluid Extract Taraxacum (Dandelion) under direction of the Duffy Malt Whiskey Company which tincture he knows to be used in the preparation of the medicinal compound known as Duffy's Pure Malt Whiskey His knowledge *that these medicinal agents are* used is because of the fact that he personally delivers the same to Walter J Duffy vice-president of the Rochester Distilling Company

He further declared

> That he himself personally makes the medicinal *tincture and* from his own knowledge says that the character of the product and its *effect on the system is in marked contrast with any straight* whiskey in fact he regards it as a whiskey in name only a medicine of the greatest value in fact

It will be noticed that the *amounts* of the drugs alleged to be put in the whiskey are not given Further affidavits were filed in the case from several Rochester physicians each of whom had some words of praise for this stuff

SOME SWORN TESTIMONIALS

Dr William B Conner regarded Duffy's Malt Whiskey "as a valuable curative agent" which he had "had occasion to use in his practice"

Dr W Hobart Curtis affirmed that 'the effect of Duffy's Pure Malt Whiskey is different from that of any other whiskey "

Dr Edwin S Hayward, Jr swore that he considered the stuff "a medicine of widely acknowledged value" and that it has been his habit to prescribe it "in cases where the activities have been at low ebb"

Dr Harry M Schall declared under oath that "on numerous occasions he has used Duffy's Pure Malt Whiskey in his practice"

Dr J Sherburne Read declared that 'Duffy's Pure Malt Whiskey has been used and prescribed by him for a number of years" Incidentally it may be mentioned that Dr Read at present is the director" of *the Okola Laboratory, a fraudulent* mail order medical concern operated by the Neal Adkin syndicate

Dr George W Goler, *who at that* time was health officer of the city of Rochester, declared that he 'has been informed of the drugs used in medicating Duffy's Pure Malt Whiskey *and with this information and his knowledge of the power of* such drugs, he is free to say that the quantity and quality of the medicines so employed substantially transform the liquor *from the condition of being purely a whiskey to a medicated* compound"

Dr John A Stapleton deposed that "he was made acquainted with the method of medicating Duffy's Pure Malt Whiskey and the drugs employed for the purpose" and was 'of the opinion that the liquor during such medication undergoes a decided change"

Dr. J J A. Burke swore that he was aware from the beginning that Duffy's Pure Malt Whiskey was being medicated' and further that he 'knew of the ingredients employed for the purpose and thought them good"

Dr Richard M Moore declared that he was "convinced that the liquor can *no longer* be considered a stimulant pure and *simple, but a medicated combination by the solvent power of* alcohol" [Italics ours—Ed]

Dr. William M Barron stated that "he knows the remedies *employed in medicating* Duffy's Pure Malt Whiskey" and "unhesitatingly considers that this whiskey is changed in a marked degree by the introduction of these drugs"

Thus did these *Rochester physicians solemnly declare that* Duffy's Malt Whiskey was a "patent medicine" and not a cheap whiskey Nevertheless, the analyses made by three *chemists, working independently, conclusively proved that there* were no drugs present in sufficient quantities to be demonstrable by chemical analysis! Again it should be noted that while the Duffy concern swore *that drugs were put into its* whiskey, it was careful to avoid giving any information regarding the quantities of the drugs that were alleged to be added

The state chemists of North Dakota *subjected this product* to chemical analysis and in the Agricultural Experiment Report for 1906 declared

> "Analysis indicates it to be nothing more than neutral spirits, colored and flavored The amount of solids is high because it has syrup added to make it 'smooth and give it flavor"

POLITICAL INFLUENCE PROTECTS A FRAUD

For years, Duffy's Malt Whiskey has gone out to the public *with the most flagrantly false and fraudulent claims* made for it on the wrapper around the bottle The government officials finally took action and in 1908 a quantity of Duffy's Malt Whiskey was seized on the charge of being adulterated and misbranded under the Food and Drugs Act What happened? It appears that the Hon James Breck Perkins, member of Congress from Rochester, at once "got busy"

At the time of the prosecution by the state of New York, Mr Perkins was attorney for the Duffy Malt Whiskey Company and it was he who filed the brief in behalf of the company in support of the motion for a new trial Mr Perkins at that time, was apparently highly incensed by the activities of the state authorities against Duffy's Malt Whiskey In closing his brief at that time, Mr Perkins expressed himself thus

> It does not seem to me that the officers who represent the state in any proceeding and certainly not in criminal proceedings are *required to exhibit so extreme a zeal*

Apparently zeal, in a public officer acting against large vested interests, however fraudulent, is something that Mr Perkins would not tolerate It is not surprising, then, that when the Department of Agriculture seized a large consignment of Duffy's Malt Whiskey, Congressman Perkins should rush to the rescue The incident was described somewhat fully by *Collier's* at the time According to that paper, Perkins wrote his first letter on the official stationery of the House Committee on Foreign Affairs of which committee he was a member It read in part

> The Duffy Malt Whiskey Company is controlled by our *most prominent and leading citizens and I trust matters can be adjusted in such a way as not to injure a long established industry'*

He wrote a second letter, it is claimed, this time on the official stationery of the Printing Committee In addition, letters were written by various other prominent politicians of western New York and a dozen personal visits were made to Washington No less than six different officers of the Department of Agriculture are said to have been written to The hearing was postponed time and again. Finally, it was set for a definite date but before *that time arrived it was, again postponed* This, it must be remembered was in 1908 In the latter months of 1910, The Journal attempted to get some information regarding the status of the case We were told that the case was still pending It is now almost 1913 and so far as we can learn, the case is still pending! *Collier's*, in closing its article regarding this disgraceful piece of political activity says

> "Consider, now, one question Was Perkins paid for what he did? Did he make that long hot trip from Rochester to Washington the night of July 16—Congress not being in session—from motives of public duty, or did he get money for it? If he

got money he is guilty of exactly the same crime as that for which Senator Burton of Kansas went to the penitentiary For the immediate activity of the Secret Service men there is no more pressing need than the investigation of whatever checks may have passed during the last eight months from the Rochester manufacturers of Duffy's Malt Whiskey (Walter J Duffy president) to the Rochester law firm of Perkins, Duffy & McLean (this latter Duffy being J P, son of Walter J)

"But whether Congressman Perkins has been guilty of a crime is not the point of this article What is important is to let all the people know how necessary is their constant vigilance and support to see that the Pure Food Law is carried out If you were an obscure subordinate in the Department of Agriculture or the Department of Justice, if you had no motive to proceed against a swindling patent medicine or an adulterated food except your own conscience, if your first move met with personal protest from the congressman who controlled your salary, your promotion, and your official existence, how soon would you grow tired? The enforcement of the pure food law needs all the encouragement and enthusiasm that the public can contribute, there is no trouble about the enthusiasm of the opposition—that is a matter of dollars and cents, and it is working twenty four hours a day "

"DUFFY'S ANNUAL"

Every bottle of Duffy's Malt Whiskey is wrapped in a large circular called "Duffy's Annual" This "Annual" consists, largely, of testimonials from laymen and physicians We have on file one issued in 1901 and another issued in 1911 There are noticeable differences between the two circulars In the earlier annual much is made of the statement that Duffy's Malt Whiskey contains no fusel oil, nothing is said on this point in the later circular The 1901 issue comes out frankly with the falsehood that Duffy's Malt Whiskey "cures consumption," etc In the 1911 circular the 'lie direct" has given place to the lie with circumstance" The earlier circular contains a long testimonial from Willard H Morse and the Duffy company at the conclusion of the testimonial adds

> Dr Morse is not only an M D and an F S Sc. but is a well known therapeutist and a consulting chemist of national reputation

The facts are that Willard H Morse is a professional testimonial writer who has issued fake analytical reports for some of the biggest frauds on the American market The title F S Sc." is one that is given—price $5 (1 guinea)—by a fraudulent organization in London that styles itself the Society of Science, Letters and Art This title is very popular with 'patent medicine" fakers

The earlier "Annual" recommends Duffy's dope for "painful and irregular periods"—pathologic states about which the later one says nothing The 1911 circular 'features" a testimonial from the "Hon Richard Curran, M D, formerly mayor of Rochester" This testimonial may carry weight with those who do not know that Dr Richard Curran is in the employ of the Duffy's Malt Whiskey Co He it was as we have shown who testified in May 1905, that he prepared the various drugs which were put in Duffy's Malt Whiskey But we have on file a letter written in 1910 by Dr Curran—and written on the stationery of the Duffy Malt Whiskey Company—in which he declares

> Duffy's Pure Malt Whiskey is not a patent medicine but a refined medicinal whiskey made from choice materials and complies with the test requirements of the United States Pharmacopeia

Does this mean that the Duffy product of to day is different from that sold five or six years ago? It would seem so Some of the more recent pamphlets sent out by the Duffy Malt Whiskey Company contain what purport to be analyses made by chemists One of these is from Joseph De Cuehuce who it will be remembered, when testifying in 1905 as chief chemist of the health department of the city of New York, declared that he found this product to be "whiskey with a little cane sugar added to it " But Dr De Cuehuce later became associated with the Lederle Laboratories and in that capacity he declared 'Duffy's Pure Malt Whiskey is free from added sugar "

We have been asked at various times whether the testimonials of Duffy's Malt Whiskey purporting to come from physicians are genuine Investigation of a large number of them indicates that the testimonials as now published are documentarily genuine Evidently the Duffy Company has found that it is no longer necessary to "fake" testimonials,[1] as it has done in the past

Of 104 physicians who had written testimonials for Duffy's Malt Whiskey, 5 are members of the American Medical Association, and 18 have written testimonials for other nostrums From our files it appears that some of the 104 testimonial givers are either advertising quacks or are connected with fraudulent medical concerns It is not difficult to estimate the scientific value of testimonials that come from such sources

CONCLUSION

We may accept the statement of the state chemists of North Dakota that the stuff is plain alcohol with syrup added to give it smoothness' and coloring added to make it look like whiskey or we may believe the federal chemist who declared it simply whiskey of a very poor quality " or we may think that Chemist De Cuehuce was right when he said it was 'whiskey with a little cane sugar added to it " or we may prefer Dr De Cuehuce's later pronouncement that the stuff is free from added sugar," again we may feel that Dr Curran's early declaration is worthy of attention and that Duffy's Malt Whiskey contains drugs and is a medicine' or possibly we may take Dr Curran's later statement that the product is merely a whiskey as defined by the Pharmacopeia But whether we consider Duffy's Malt Whiskey a 'patent medicine" or a low grade booze' makes little difference On one point we can agree unanimously the stuff is an impudent fraud As we have said elsewhere A high grade whiskey has but a limited place in therapeutics, Duffy's Malt Whiskey has none

ADVERTISING FAKES

This from the Pulaski County *Democrat* of Winamac, Ind November 14, is commented on editorially this week

> The *Democrat* received a few days ago a proposition to publish considerable advertising matter boosting a patent medicine called Nature's Creation,' which is asserted in the strongest language to be a cure for consumption The offer meant quite a sum of money to us, but we refused to have anything to do with it
>
> The reason for our action is that we do not knowingly advertise any article that is a fake and we have what we believe to be reliable and authentic information that this pretended cure is a fake, a fraud, and that it will *not* cure consumption therefore were we to advertise the stuff to do what it cannot and thereby induce ailing persons to depend on a worthless nostrum until death resulted, our own skirts could not be clean morally
>
> Our information is that this 'Nature's Creation now emanating from Columbus or Indianapolis or both was exploited in Chicago not very long ago as an absolute cure for syphilis but as the public became more and more interested in the subject of tuberculosis during the last four or five years the stuff has been changed to a consumption specific—probably more sale for it thus than for syphilis
>
> We have a list of forty five Columbus Ohio persons who are alleged to have taken this cure for consumption—and died we have not heard of any cured by it It might be the proper thing if suicide is the object '

Correspondence

Dr Robert Fletcher An Appreciation

To the Editor —With the death of Dr Robert Fletcher principal assistant librarian of the Surgeon General's Library for nearly thirty five years there passed away a mentor of medicine who was looked up to and honored everywhere for his intensive labors in medical bibliography his rare scholarship and that courteous and cheerful spirit of helpfulness which in the words of Dr Howard Kelly has endeared him to the entire profession of the United States " [illegible] when he died, his span of life, like Heberden's, extended over nearly a century, and with Heberden the scholar, as distinguished from the clinician, he had many points of resemblance In his lifetime, he had seen and met personalities so various and so widely separated in time as Sir Astley Cooper and Halsted, Daniel Drake and Sir William Osler, Emerson and the philosophers and poets of a later period A native of England, he had served his adopted country for fifteen years with distinction as an army surgeon during the Civil War and afterward, and he was buried at Arlington with the honors commensurate with the military rank he attained

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[1] Some testimonials investigated [illegible] Journal [illegible]

Dr Fletcher was born in Bristol, England, on March 6, 1823 He studied law under his father, a Bristol attorney, for two years before taking up medicine He spent five years at the Bristol Medical College and the London Hospital, being, at the time of his death, the oldest living graduate of the latter institution He became a member of the Royal College of Surgeons and the Society of Apothecaries in 1844 In his youth, Dr Fletcher was attracted by American institutions, and, crossing the ocean with his young wife, settled in Cincinnati in 1847 During the Civil War, we find him surgeon of the First Regiment of Ohio Volunteers in 1861, and after three years active service in the field, commissioned as surgeon, U S Volunteers, in charge of Hospital No 7 at Nashville, Tenn., and subsequently medical purveyor of the Army at the same post At the end of the war, he was brevetted lieutenant colonel and colonel, U S Volunteers, for his faithful and meritorious services In 1871, he was on duty in the Provost Marshal's bureau of the War Department active in the preparation of the two volumes of anthropometric statistics issued by that office (1875) and the author of the treatise on anthropometry in the same work In 1876, he became associated with Dr John S Billings in the Library of the Surgeon General's office, and his important labors on its index catalogue extended from the date of publication of its first volume in 1880 to the last year of his life, a period of thirty three years Of the value of this phase of Dr Fletcher's work, it is only necessary to quote the judgment of Dr Billings himself that "the accuracy and typographical excellence of the volumes are largely due to his careful and skilful supervision " The same painstaking care in preparation and proof reading are evidenced in the *Index Medicus*, in the redaction of which Dr Billings and Dr Fletcher were associated as editors for twenty one years (1879 99) and of which Dr Fletcher was editor in chief for nine years, after the journal was revived by the Carnegie Institution in 1903 From his early studies in law, Dr Fletcher acquired a deep interest in medical jurisprudence and was lecturer on this subject at the Columbian University, Washington, D C, 1884 1888, and at the Johns Hopkins University, 1897 1903 He was president of various scientific societies in Washington and the recipient of many honors most prominent of which were the banquet given to him by leading members of the profession on Jan 11, 1906, and the unique award of the gold medal of the Royal College of Surgeons in 1910, a distinction which had been conferred on only eleven physicians in ninety years, most prominent of whom were Parkinson (1822), Thomas Bevill Peacock (1876), Richard Owen (1883), Sir W J Erasmus Wilson (1884), Sir James Paget (1897) and Lord Lister (1897) Only a few days before his death Dr Fletcher was pleased to receive a degree in medicine from the institution which he had first attended in his native town A severe attack of diphtheria in the spring of 1911 brought on a condition of enfeebled health which he bravely weathered but to which he gradually succumbed, dying on the morning of Nov 8, 1912

In personality, Dr Fletcher was a dignified, stately gentleman of the old school, much admired and respected by old and young alike for his cheerful stoicism and military promptitude, his ready wit and courtly ways, and his literary productions were the expression of his personality These are doubly attractive through the simple and direct manner in which the results of exhaustive research are conveyed and a certain strain of grave irony in which, as we have said, he resembles Heberden His earlier essays were entirely in the field of anthropology and include, besides the statistical and anthropometric treatise above referred to, the pioneer monograph in English on "Prehistoric Trephining and Cranial Amulets" (1882), with interesting contributions on Paul Broca (1882), "Human Proportion in Art and Anthropometry" (1883), "Tattooing Among Civilized Peoples" (1883), "Myths of the Robin Redbreast in Earlier English Poetry" (1880), "The New School of Criminal Anthropology" (1891), "Anatomy and Art' (1895), and "Scopelism" (1897), the latter being also the first paper on the subject in English A short paper on "Columns of Infamy" will soon appear in the American Anthropologist (No 4, 1912) Dr Fletcher's affiliations with the Medical Faculty of the Johns Hopkins University led to the production of a number of valuable papers on medical history, of which the best were his essays on "Medical Lore in the Older English Dramatists and Poets" (1895), "The Witches' Pharmacopeia" (1896), and "A Tragedy of the Great Plague at Milan in 1630" (1898) The former of these reveal his unusual offhand knowledge of English poetry, the latter is a remarkable piece of synthetic work, the story having been developed *ab initio* from a rare old Italian engraving An unpublished essay on "Some Diseases Bearing the Names of Saints" will shortly appear in the *Bristol Medico Chirurgical Journal*

The profession will lose in Dr Fletcher the accomplished bibliographer and medical scholar, his intimates will miss the high minded, honorable gentleman, the staunch and loyal friend.

Fielding H Garrison, M D, Washington, D C

The New Hospital at Louisville

To the Editor —I have just returned to Louisville after an absence of ten months spent on the Pacific Coast, and find many changes here in things medical Chief among them is the creation of a million dollar city hospital I once heard it remarked that to judge any place correctly "one should look at the advantage of its public schools and the conditions of its cemetery " These may be good criteria, but I would add, "inspect the hospital intended for the treatment of the poor " Indeed, throughout Europe and this country as well, no greater problem confronts the medical profession than the proper management of these institutions

You will permit, I am sure some detailed mention of the superb building that is now nearing completion in this city It may be that the erection of a similar institution is being contemplated elsewhere in which case those who have charge of the matter may profit by reading this, or what would be better, may accept the invitation to come here and inspect the new building before completing their plans

The hospital occupies a lot 727½ by 342 feet, located nearly in the center of the city This is much to be preferred to a location in the suburbs, owing to the greater ease with which the patient may reach the hospital The plans are on what might be termed a combination of the pavilion and cottage systems The hospital consists of a central administration building, and four ward buildings, arranged symmetrically along a south connecting corridor while the service, clinic and operating building and the psychopathic and special treatment building are on the north side of the corridor Detached from the main group of buildings are the isolation buildings, help building, nurses' home and power plant The buildings are generally of three stories with a high basement The ward buildings have flat roofs with parapet walls, so that they may be used as roof gardens for recreation and outdoor treatments They have elevator service direct to the roof and will prove a valuable adjunct in the modern treatment of disease All the buildings are constructed of concrete, reinforced by steel, and are believed to be fire proof There are no bells used but all signals are given by electric lights communicating directly with the patient's bed Each floor is a separate unit as far as unguarded intercommunication, transmission of noises and cross infection are concerned

The stairs throughout are monolithic, of reinforced concrete faced with terrazzo are absolutely aseptic and are easily cleaned The roof of the administration building has a semi enclosed roof garden, to be used as an outdoor ward for chil dren, so that they may have recreation without disturbing the other patients. It is roofed over and can be open or closed as desired.

One entire floor is taken up by operating rooms and their adjuncts. All specialties have their recognition in a separate and distinct operating room. Amphitheaters have been dispensed with for obvious reasons, excepting that for medical teaching one is provided with a seating capacity of 450; clinical instruction will be given in small rooms provided with skeleton iron stands.

The maternity wards are subdivided, with a ward for waiting women, two rooms for babies, a room for post delivery cases and one for convalescents, with special accommodations for patients who may be infected.

The hospital is provided with psychopathic wards so that suspected persons may be restrained and treated without first being declared insane by a jury.

I desire to call special attention to the fact that one of the most important departments in this hospital is that of nursing and a special nurses' home has been provided. This is the more important, as the training school is maintained here. It is a maxim that has been proved true, that the better a hospital cares for its nurses, the better will be the class of women who enter the training school. Each nurse is provided with a separate room, plainly, neatly and tastefully furnished, each with clothes closet, lavatory with hot and cold water, a small *combined desk and a wall bookcase. A small infirmary is* built for those who may be ill. Special rooms afford opportunities for nurses to entertain their friends, and small kitchens have been built where nurses may prepare little treats for themselves or their friends.

It would take pages to describe in detail this splendid hospital, but I will make this suffice. I believe that it is the most modern and up to date hospital in the United States. It was erected under the supervision of a non partisan commission on which was a physician, Dr. Ap Morgan Vance. Without disparagement to any one of the other distinguished and honored members of the commission, it can truthfully be said that much of the success in this great enterprise is due to Dr. Vance, who has been untiring in his work. Together with the others, Louisville owes him a deep debt of gratitude, and the medical profession here is proud of him and his work as evidenced in the result.

Joseph M. Mathews, Louisville, Ky.

Queries and Minor Notes

Anonymous Communications will not be noticed. Every letter must contain the writer's name and address, but these will be omitted on request.

AVOIDANCE OF NERVOUS SHOCK IN ANESTHESIA

To the Editor:—1. Some time ago I saw in a lay paper the statement that from Paris had come a feature in surgical procedures that would rob operations of all their horrors: the hypodermic (or intramuscular?) injection of ethyl chlorid a day or two before operation to paralyze the fear center in the brain. Please send me some details or refer me to some articles regarding it. That with persistence of local anesthesia for days after injection of urea hydrochlorid and quinin would be very desirable.

2. Please tell me how reliable the Noguchi modification of the Wassermann test is.
J. I. R.

Answer.—1. The newspaper report referred to by our correspondent is probably the result of a play of popular fancy on a meager scientific basis. In our Paris Letter (The Journal, May 25, 1912, p. 1612), intramuscular etherization is mentioned. Dr. Descarpentries occasionally used an inhalation of ethyl chlorid preliminary to the intramuscular injection of the ether. This method of intramuscular etherization has been condemned by a number of Paris physicians, as will be seen in The Journal of July 27, 1912, p. 288. Considering the extreme volatility of ethyl chlorid, one would hesitate to use it by hypodermic injection.

The aim of the procedure suggested seems to be the same as that of Crile's principle of *anoci association*. According to this the effort is made to plan and carry out operations so as to prevent the formation of harmful associations and the discharge of nervous energy leading to exhaustion. This is done by avoidance of everything that may tend to cause the patient preliminary worry or fear, and by cutting off the brain from the operative area by local anesthesia in addition to general anesthesia during operation, and by local anesthesia alone for a considerable period after operation. See Crile: The Results of Operations, Especially Abdominal, Performed on the Principle of Anoci Association, The Journal, July 13, 1912, p. 114. Watson's modification of Crile's procedure (*Med. Rec.*, Oct. 5, 1912, p. 617) is to put the patient under local anesthesia before beginning general anesthesia and to begin and finish the operation under local anesthesia alone.

2. Many observers believe that the Noguchi modification is as reliable as the original Wassermann method, and others consider it more reliable.

QUALIFICATIONS FOR PRACTICE IN WEST VIRGINIA

To the Editor:—Can an unregistered physician legally practice medicine in West Virginia as the hired assistant of a qualified and registered practitioner? In answering please omit my name.
H. J. S.

Answer.—No person can practice medicine legally in West Virginia unless he holds a certificate issued by the State Board of Health. Section 4390 of Chapter 150 of the Code of West Virginia is as follows: "The following persons and no others shall hereafter be permitted to practice medicine in this state: 1. All such persons as shall be legally entitled to practice medicine in this state at the time of the passage of this act. 2. All such persons as shall be graduates of a reputable medical college *recognized as such by the State Board of Health*, who shall pass an examination before said State Board of Health and shall receive certificates therefrom, as hereinafter provided."

THYMUS SUBSTANCE IN ARTHRITIS DEFORMANS

To the Editor:—Please refer me to any articles on the treatment of arthritis deformans with thymus gland. I read an article on the subject which appeared in The Journal but am unable to find it again.
C. T. Lankhurst, North Star, Mich.

Answer.—References to articles on the treatment of arthritis deformans with thymus substance were given in this department Sept. 28, 1912, p. 1205.

FINLAY'S MOSQUITO THEORY OF THE TRANSMISSION OF YELLOW FEVER

To the Editor:—In your interesting answer (November 9, page 1713) to the question of Dr. I. J. McKinley concerning the relation of the mosquito to disease, you make no mention of Dr. Finlay of Havana, for whom some claim priority in the suggestion that the spread of yellow fever is due to the mosquito. I am sure that it will interest many of your readers to have the facts of this relation presented.
James Tyson, Philadelphia.

Answer.—To Dr. Carlos J. Finlay of Havana is generally awarded the credit for first explicitly pointing out the connection between *the carrier and the disease. In 1881 Finlay* advanced the theory of the conveyance of yellow fever by the bite of the mosquito and correctly distinguished the species of mosquito (*Stegomyia calopus*) which, as later proved by the experiments of the American Yellow Fever Commission, transmits the disease to man. He had not at that time the advantage derived by later investigators from knowledge of the rôle played by the mosquito in malarial fever and believed yellow fever to be conveyed from one patient to another by direct inoculation of a virus. While his experiments undertaken to prove the theory were uniformly unsuccessful, this detracts nothing from the value of the inductive reasoning by which he reached his conclusion. The dramatic interest attaching to the heroic work of the U. S. Army Yellow Fever Commission has tended to overshadow Dr. Finlay's work somewhat in popular estimation, but members of the commission in their published writings have acknowledged that they were working on the foundation supplied by Dr. Finlay's theory. No discovery in early literature of any casual hint or hasty hypothesis as to the relation of mosquitoes to yellow fever will disturb Finlay's claim to credit as the man who for twenty years pertinaciously defended the theory [illegible] in the face of an indifferent if not hostile public. [illegible] in this [illegible] as in many others it is interesting to [illegible] how correct the [illegible] and suggestive observation [illegible] the [illegible] who conceived the theory [illegible] *failed to appreciate their value* [illegible] time or opportunity to follow them up. [illegible] inappropriate to [illegible] with [illegible] claims to recognition as those discussed November 9 the solid and undisputed facts as to Finlay's connection with the subject Perhaps this was a mistake, at all events the neglect to mention Finlay was not prompted by a desire to depreciate his achievement

IS LIGHT FATAL TO PLASMODIA?

To the Editor —In The Journal, October 12 p 1381 you write on Cultivation of Malarial Plasmodia and refer to an action of quinin

The rediscovery of the filaria by observers in Egypt following its discovery by ——————' was put off by the neglect to examine the patients after sunset the parasite coming to the surface of the body in the dark Negroes native to Africa become immune to malaria (and filariasis) by having skins impervious to light The three substances causing death of the plasmodia are all substances which have the power of causing fluorescence They are quinin, esculin and fraxinin

Is it not likely from these facts that light or actinism is fatal to plasmodia and that exposure of patients to sunlight after introducing one of the above named fluorescent substances would hasten recovery? Edmund D Spear M D *Boston*

Answer —The theory that the action of quinin on malarial parasites is connected with its property of fluorescence was advanced a number of years ago While it is a curious circumstance that the substances enumerated by our correspondent are fluorescent, we do not think that the theory that fluorescence is necessary to a pharmacologic action is rational

It is a remarkable fact that quinin exhibits fluorescence only when the haloid acids or salts are not present Such salts as chlorids, bromids or iodids added to a fluorescent solution of quinin prevent the occurrence of fluorescence Since the blood contains chlorids in a considerable quantity, it is not reasonable to expect the fluorescence of quinin to be exhibited in such a medium, and hence it would seem improbable that this property could affect the action of the remedy on the plasmodia. Moreover, certain cinchona alkaloids, such as cinchonin or cinchonidin are not fluorescent, but have a positive action on malaria

NO SODIUM SALICYLATE HYPODERMIC TABLETS—NO ARTIFICIAL QUININ

To the Editor —1 Why are not hypodermic tablets of sodium salicylate or any other salicylate preparation on the market for hypodermic use?

2 Is the quinin in common use natural or artificial and if the latter does it possess the same antimalarial virtue as that derived from natural sources? Ralph S Cone, M D Westwood N J

Answer.—1 Sodium salicylate is not used for hypodermic injection because the dose is large, and, unless much diluted, would be likely to cause irritation Usually this substance can be given by the mouth without inconvenience, and it has been proposed, in cases in which the stomach is rebellious, to administer it by rectal injection We do not know that any proposal has been made to administer it hypodermically It is not put up in the form of hypodermic tablets by the pharmaceutical houses because there is no demand.

2 So far as we know, no artificial quinin has been put on the market The quinin in commerce is obtained from the compounds of quinin existing in cinchona bark

OINTMENT FOR CARCINOMA OF THE SKIN TREATMENT FOR ALCOHOLISM

To the Editor —1 Please publish the formulas of the ointment used to remove moles and carcinoma of the skin that you published several months ago It was similar to the remedy Squibb & Sons sold.

2 Also refer to the page that contained the treatment for alcoholic patients Ross C Martin M D Kokomo Ind

Answer —1 The ointment to which our correspondent refers is probably the proprietary Thoremedin formerly called Thoradin, of which we published an analysis, March 9, 1912, p 719

2 The article entitled "The Treatment of Drug Addiction," by A Lambert, was published in The Journal Feb 18, 1911, p 503

CONTINUED USE OF SODA IN HYPERCHLORHYDRIA

To the Editor —Please answer the following in your Queries and Minor Notes Department, and do not publish my name Can the continued use of sodium bicarbonate in 30 grain doses taken after each meal say for a term of years for hyperchlorhydria do any harm? Could it be a possible factor in producing general pruritus? M. T R

Answer —The dose mentioned will barely neutralize the acid in 500 c.c of normal gastric juice In case of hyperacidity it would not completely neutralize the acid In case the alkali is completely neutralized by the acid in the gastric juice, as would probably be the case in presence of hyperacidity, sodium chlorid would be formed, so that the use of the sodium bicarbonate would be practically equivalent to the administration of a small dose of about 20 grains of sodium chlorid Of course, it is not advisable to continue a single remedy for so long a time, and certainly it would be desirable to make frequent examinations of the stomach contents to determine that the hyperchlorhydria continues The effect of the continued neutralization of the stomach contents might be to cause a frequent or continual alkalinity of the urine, which might have undesirable results In general, however, the use of alkalies in hyperchlorhydria is productive of good and not harm

BISMUTH PASTE

To the Editor —Please publish formulas for bismuth paste as used by Beck and others J M F

Answer.—The following were recommended by Beck in his original article in The Journal, March 14, 1908, p 868

Formula of paste for diagnosis and early treatment

℞

Bismuth subnitrate	1 part
Petrolatum	2 parts

Mix while boiling

Formula of paste for late treatment

℞

		gm		
Bismuth subnitrate		30		℥i
White wax				
Soft paraffin	āā	5	āā	gr 75
Petrolatum		60		℥ii

Mix while boiling

Another formula was given in Dr McKelvey Bell's article, The Journal, May 4, 1912, p 1340

℞

Bismuth subnitrate	1 part
White petrolatum	2 parts

Dissolve on hot water bath stirring until cool then (still stirring) add 5 per cent of iodoform (i e 72 gr)

OXYPATHOR

To the Editor —Can you give me any literature on the Oxypathor? There is a woman pushing it in Harrisburg She has a sign on her door and travels from house to house trying to sell it for $35 One is on exhibition in a book store window It is a fake They have sold a number claiming that it cures all diseases David J Hetrick, M D Harrisburg Pa.

Answer —Our correspondent is right The Oxypathor is a fake and one of the most impudent on the market. It used to be sold under the name "Oxygenator" and as such has been debarred by the Australian government from importation into that country, also, its sale was prohibited some time ago in the state of Vermont The device is essentially a nickel plated piece of gas pipe filled with a crude mixture of inert substances, apparently iron filings, clay and coke dust This fraud is exposed at some length in a pamphlet issued by the American Medical Association entitled "The Oxydonor and Similar Fakes," which will be sent on receipt of four cents in stamps The same matter appears in the book "Nostrums and Quackery," price one dollar

LITERATURE ON POSTGRADUATE WORK ABROAD

To the Editor —Have you any bureau of information or literature which will give me valuable and necessary information for reaching and profiting by a course of study in the medical schools of Europe particularly the schools in Berlin?

E Hornibrook M D Cherokee, Iowa

Answer —Our correspondent and a number of others who have made similar inquiries are referred to this department of The Journal, Oct 5, 1912, p 1310, Oct 19, 1912, p 1474, and April 8, 1911, p 1050 The last reference is to a long article describing the facilities of the chief medical centers of Europe in detail

SEXUAL DESIRE AFTER CASTRATION AFTER PUBERTY

To the Editor —Please inform me if castration after puberty completely or only partially destroys the sexual desire and also if a double oophorectomy completely destroys or only partially inhibits the sexual desire in the female P T R

Answer.—It is usually believed that castration after puberty may permit the retention of a certain amount of sexual desire This is certainly true in the case of double oophorectomy In the latter case some women lose their sexual feeling, while others retain it apparently unimpaired

CONVERSE TREATMENT FOR EPILEPSY

To the Editor —Please tell me the composition of the Converse Treatment for Epilepsy

S I L

ANSWER —Practically every nostrum on the market sold for the self treatment of epilepsy contains large quantities of bromids These are taken by the patient in utter ignorance of the danger and in quantities that no physician with any respect for his patient's safety or his own good name would dare prescribe Such heavy doses suppress the attacks but brutalize the patient and lead to a loss of mental and physical activity The Converse Treatment for Epilepsy was analyzed by Prof E F Ladd of the North Dakota Agricultural Experiment Station Professor Ladd reported that the sample was an aqueous solution of several bromids with an aromatic galenical preparation, and that it contained

Ammonium bromid	4 28 per cent
Total bromin	10 306 per cent

Professor Ladd added "The total bromin calculated as the equivalent of potassium bromid would equal 15 486 per cent But not all of the bromin is in combination with the potassium, for there are present in the preparation sodium bromid potassium bromid, strontium bromid, ammonium bromid and iron bromid "

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CALIFORNIA Los Angeles December 3 6 Sec Dr Charles L Tisdale 929 Butler Bldg San Francisco

DELAWARE State Society and Homeopathic Examining Boards Dover and Wilmington December 10 12 Secretary of the Medical Council Dr Henry W Briggs 1026 Jackson St Wilmington

KENTUCKY The Armory Louisville December 12 Sec Dr J N McCormack Bowling Green

MARYLAND Regular 1211 Cathedral St Baltimore December 10 Sec Dr J McPherson Scott Hagerstown Homeopathic St Luke s Hospital Baltimore December 13 14 Sec Dr O N Duvall 1326 N Mount Street

OHIO Columbus December 10 12 Sec Dr George H Matson State House

PENNSYLVANIA Philadelphia December 3 5 Sec Nathan C Schaeffer Harrisburg

VIRGINIA Richmond December 17 20 Sec, Dr Herbert Old Norfolk

Affiliation of Hospital with Medical School

The announcement has recently been made of an affiliation between the New York Hospital and the Medical Department of Cornell University in New York City The terms of the copartnership are that in consideration of a substantial fund donated to the hospital to aid its future building projects, the institution gives to the medical college for purposes of teaching and research one half of its entire service, comprising medical, surgical and children s wards in all about 150 beds The exact amount of the gift has not been made public, but the donor, Mr George F Baker, is a member of the board of governors of the New York Hospital and is said to be deeply interested in medical education He thus evinces his conviction that the greatest efficiency for both hospital and medical school is to be attained through coalition This coalition is fully in accord with the principles long advocated by the Council on Medical Education of the American Medical Association Already throughout the country fully a dozen coalitions between university medical schools and neighboring hospitals have been brought about Each coalition strengthens the cause of higher medical education by increasing the opportunities of colleges in both undergraduate and graduate instruction and by supplying them with the definite field for advanced research without which such work must always be restricted The further announcement is made of the gift to the medical college by another philanthropist of a $1 000 annual fellowship in medicine to be allotted for work in the New York Hospital medical wards The college besides large building properties and equipment now possesses an endowment for maintenance of $4 000 000 which places it among the highest endowed medical schools in the country

Georgia October Report

Dr C T Nolan secretary of the Regular Medical Examining Board of the State of Georgia reports the written examination held at Atlanta Oct 8 10 1912 The number of subjects examined in was 10 total number of questions asked 100, percentage required to pass 80 The total number of candidates examined was 30 of whom 20 passed and 10 failed The following colleges were represented

PASSED College	Year Grad	Per Cent
Birmingham Medical College (1911) 87 5	(1912) 80	80
Howard University Washington D C	(1912)	87 5
Atlanta School of Medicine	(1912) 81 5	87 5
University of Louisville	(1912)	87 5
Tulane University of Louisiana	(1912)	81 [illegible]
University of Maryland	(1912)	87 5
Maryland Medical College (1911) 81	(1912)	85
College of Physicians and Surgeons Boston	(1911)	86 5
St Louis University	(1912)	84
North Carolina Medical College	(1912)	85
Leonard Medical School	(1912)	81 5
Medico Chirurgical College of Philadelphia	(1908)	80
Med Coll of State of South Carolina (1901) 84 5	(1912)	82
Chattanooga Medical College	(1908)	81
Westminster Hospital London England	(1897)	81
FAILED		
University of Louisville	(1912)	77 5
Maryland Medical College	(1911)	77
University of the South	(1905)	77 5

Meharry Medical College (1908) 77 5 (1912) 74 75 5 70 77 [illegible] 78 78 5

Georgia Reciprocity Report

Dr C T Nolan secretary of the Regular Medical Examining Board of the State of Georgia reports that twenty three candidates were licensed by that Board through reciprocity from June 1 to Oct 29 1912 The following colleges were represented

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
Medical College of Alabama	(1894)	Florida
Northwestern University Medical School	(1911)	Iowa
Sioux City College of Medicine	(1897)	Nebraska
University of Louisville	(1903)	N Carolina
Hospital College of Medicine Louisville	(1897)	Kansas
Tulane University of Louisiana	(1910 2)	Louisiana
Baltimore Medical College	(1903)	Maryland
College of Physicians and Surgeons Baltimore	(1882)	Virginia
Johns Hopkins University	(1903)	Wisconsin
University of Michigan Dept of Med and Surg	(1912)	Michigan
Washington University St Louis	(1897)	Missouri
Barnes Medical College	(1903)	Missouri
Columbia University College of Phys and Surg	(1901)	Dist Colum
North Carolina Medical College	(1907)	N Carolina
Tennessee Medical College	(189[illegible])	N Carolina
University of West Tennessee	(1903)	Tennes
Vanderbilt University (1899)	(1908)	Tennes
University of Tennessee (1891)	(1901)	Tenne
Memphis Hospital Medical College	(1910)	Tennessee
University of the South	(1908)	Tennessee

Minnesota October Report

Dr Thomas S McDavitt secretary of the Minnesota State Board of Medical Examiners reports the written examination held at Minneapolis Oct 1 4 1912 The number of subjects examined in was 18, total number of questions asked 110 percentage required to pass 75 The total number of candidates examined was 6 of whom 4 passed and 2 failed Eighteen candidates were licensed through reciprocity The following colleges were represented

PASSED College	Year Grad	Per Cent
Johns Hopkins University	(1910)	88
Univ of Mich Dept of Med and Surg	(1894)	[illegible]
Barnes Medical College	[illegible]	[illegible]
University of Pennsylvania	(1911)	[illegible]
FAILED		
University of Louisville	(1911)	[illegible]
Hamline University	[illegible]	[illegible]

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
Northwestern Univ Med School (1910 2)	(1911 1)	[illegible]
Rush Medical College (1898) North Dakota (18[illegible]) Wi[illegible] (1911) Missouri (1911 2) Illinois		
Bennett Medical College	(1912)	Ill
Hahnemann Med Coll and Hosp Chicago	[illegible]	[illegible]
State University of Iowa Coll of Med	[illegible]	[illegible]
University of Louisville	(1911)	[illegible]
Baltimore Medical College	[illegible]	[illegible]
Univ of Mich Dept of Med and Surg	[illegible]	Mi[illegible]
Milwaukee Medical College	[illegible]	[illegible]

Montana October Report

Dr William C Riddell, secretary of the Montana State Board of Medical Examiners, reports the written examination held at Helena, Oct 1 3, 1912 The number of subjects examined in was 10, total number of questions asked, 50, percentage required to pass, 75 The total number of candidates examined was 29, of whom 25 passed and 4 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent
Bennett Medical College	(1900)	78 2
Hahnemann Medical College and Hospital Chicago	(1900) (1912)	78 75
Chicago Coll of Med and Surg (1911) 78 4	(1912)	84 3
College of Physicians and Surgeons, Chicago	(1910)	79 9
Rush Medical College (1905) 78 4	(1911)	80
Medical College of Indiana	(1905)	77 9
Keokuk Medical College (1907) 76 9	(1908)	76 7
Baltimore Medical College (1898) 80 7	(1903)	77 1
University of Michigan Dept of Med and Surg	(1912)	82 1 83 7
Detroit College of Medicine	(1906)	78 6
University of Minnesota Coll of Med and Surg	(1910)	79 8
Creighton Medical College (1906) 77	(1912)	81 9
University Medical College Kansas City	(1912)	83 4
Jefferson Medical College	(1912)	80 4
University of Pennsylvania	(1910)	84 6
University of Vermont	(1910)	76 7
Milwaukee Medical College (1911) 80 8	(1912)	79 9

FAILED

College	Year Grad	Per Cent
College of Physicians and Surgeons Chicago	(1910)	69 6
Georgetown University	(1903)	69 4
Michigan College of Medicine and Surgery	(1901)	73
Vanderbilt University	(1912)	78 4

Rhode Island October Report

Dr Gardner T Swarts secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, Oct 3 4, 1912 The number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 80 The total number of candidates examined was 15, of whom 13 passed and 2 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent
College of Physicians and Surgeons, Baltimore	(1912)	83 5
Harvard Medical School (1895) 85 7 (1910) 86 2	(1911)	88 2
Tufts College Medical School (1903) 85 2 (1912) 83 4 86 5	(1911)	82 3 88
University and Bellevue Hospital Medical College	(1910)	81 8
University of Pennsylvania	(1912)	80
Medico Chirurgical College Philadelphia	(1912)	81 4
Laval University Quebec	(1911)	81 4

FAILED

College	Year Grad	Per Cent
Baltimore Medical College	(1907)	68 9
Harvard Medical School	(1906)	76.2

Book Notices

Life and Letters of Dr William Beaumont Including Hitherto Unpublished Data Concerning the Case of Alexis St Martin By Jesse S Myer A B M D Associate in Medicine in Washington University, St Louis With an Introduction by Sir William Osler Bt M D F R S, Regius Professor of Medicine in Oxford University, England Cloth Price $4 Pp 317 with illustrations St Louis C V Mosby Company 1912

William Beaumont, the first great American physiologist, was licensed to practice physic and surgery by the Third Medical Society of Vermont in 1812 He had then studied medicine for two years with Dr Benjamin Chandler in St Albans One hundred years later, and fifty nine years after his death in St Louis, appears this complete story of his life and work In the words of Sir William Osler, three generations have now been interested in the work of Beaumont as well as in 'that fistulous Alexis" who was the, at times, elusive subject of his remarkable experiments The chief facts of the life of Beaumont have become well known from the many addresses and sketches that have been printed about him and his work but authentic sources for an adequate biography became available only recently when a wealth of family papers records manuscripts and letters were placed at the disposal of Dr Myer, who has spared no pains in collating this vast material to the best advantage and in following every promising thread of information to its end New England town records the surgeon general s office in Washington, various army posts, the scenes of Beaumont's activities, old newspapers and letters have been ransacked for information Every page is a witness of labor of love on the part of Dr Myer to give us a faithful picture of the great Beaumont in its proper setting so that we are able, "as it were, to see him alive" The illustrations and fac simile reproductions of letters, documents and old newspaper notices are most interesting Beaumont's letters and other writings reproduced unaltered in the various chapters serve to keep safe his individuality The result is a book that it is a real pleasure to welcome, for it constitutes a contribution of the first importance not only to the history of medicine in America but to the history of physiology It will take its place among the classics in medical biography and merits the widest distribution possible

The Pituitary Body and Its Disorders Clinical States Produced by Disorders of the Hypophysis Cerebri An Amplification of the Harvey Lecture for December 1910 By Harvey Cushing M D Associate Professor of Surgery the Johns Hopkins University Cloth Price $4 Pp 341 with 319 illustrations Philadelphia J B Lippincott Company, 1912

The anxiously expected monograph on the hypophysis has at last made its appearance Those who have followed the author's labors in this new field expected an authoritative work from his pen This monograph more than justifies expectations The subject matter is largely drawn from an enormous personal experience with the clinical and surgical affections resulting from hypophyseal disorders, supplemented by experiments on animals The theoretical views advanced are in keeping with the latest thought The case reports are well worth studying for their intrinsic merits, they are concise and yet complete and indicate the author's participation, rather than the transcribing of an ordinary hospital record The text is profusely illustrated with excellent reproductions from photographs of patients, and the microphotographs and radiographic pictures are exceptionally fine As this book is the outgrowth of the Harvey lecture for *1910*, its style in places is quite literary in character, but if anything this is a merit rather than a fault in a monograph dealing with so many new facts Every line mirrors the author, being peculiarly cushingian in its positiveness In his systematic summary of the entire subject Cushing gives due credit to every worker in this new field and his bibliography includes 256 references While many of the views expressed will undoubtedly need modification as soon as new experiences accumulate, at the present time this monograph reflects the most modern and mature thought on the hypophyseal disorders

Collected Papers by the Staff of St Mary's Hospital Mayo Clinic Rochester Minn 1911 Cloth Price $5 50 net Pp 603 with 250 illustrations Philadelphia W B Saunders Company 1912.

This volume includes the papers of the Mayo Clinic for 1911 and naturally a large variety of subjects is considered. The greater part of the book is devoted to the alimentary canal and the genito urinary organs Ductless glands receive a comparatively small share of attention Of special interest is the group of papers on diagnostic aids, including radiographic diagnosis and the use of the cystoscope The paper by Dr J H Selby, on "Collaboration in Radiographic Diagnosis," is profusely illustrated The papers on the ductless glands are by Dr Charles H Mayo, with one on "Parathyroids and Their Surgical Relations to Goiter" by Drs Charles H. Mayo and Bernard F McGrath The book closes with an obituary of William Worrell Mayo, the father of the Mayo brothers, who died March 6, 1911, at the age of 92

Lectures on General Anesthetics in Dentistry Advocating Painless Dental Operations by the Use of Nitrous Oxid Nitrous Oxid and Oxygen Chloroform Ether Ethyl Chlorid and Somnoform By William Harper DeFord A M D D S., M D Dean and Professor of Oral Pathology and Anesthetics Drake University College of Dentistry Cloth Price $2 50 Pp 312, with illustrations Pittsburgh Lee S Smith & Son Company 1912

Many new appliances for the safe administration of anesthetics have been introduced to the profession during the past year The second edition of this most valuable work is made necessary to bring the account of these later inventions up to date The first chapter is devoted to the subject "Has the Dental Surgeon the Right to Administer General Anesthetics?"

After discussing the merits of general anesthetics the author concludes that the dentist has the right to administer them if he possesses the requisite knowledge, skill and experience On the other hand, he has not the right to administer anesthetics unless he is familiar with their effects and can show his proficiency in this respect The author then discusses the value of general anesthetics in dental operations He shows the necessity of reducing pain to the minimum in the different operations, such as preparing cavities and extracting teeth The subject of shock in preparing cavities of the teeth and a general discussion of anesthetics follow

Pathologie des Herzens Von A Vogt o Professor der allgemeinen Pathologie an der kaiserlichen Universität Moskau Autorisierte Uebersetzung aus dem Russischen von Dr Julius Schütz. Paper Price 8 marks Pp 168 with 20 illustrations. Berlin Julius Springer 1912

This monograph presents in clear, concise and readable form the essential facts of cardiac pathology, the subject being approached from the side of pathology rather than from that of the clinical manifestations, diagnosis or treatment Cardiac diseases, as a rule, are clearly traced to anatomic lesions, and the proper emphasis is laid on the resulting disturbance of function The subject is presented in the form of eight lectures Facts are clearly distinguished from theory, animal experiment is often adduced in support of the views advanced and a knowledge of the clinical manifestation of heart disease is evident The author shows familiarity with the literature There is a lack of discussion of some of the more recent work on the heart, which omission is frankly stated in the preface An extensive bibliography is found at the end of the work

The Practitioner's Visiting List for 1913 Leather Price $1 25 Pp 192 Philadelphia Lea & Febiger 1912

Among the useful data in this visiting list are periods of dentition, weights and measures comparative scales examination of the urine, important incompatibles, poisons and antidotes, table of doses and therapeutic reminders The best hint given, however, is in the first line "Keep your visiting list in such a way that you can fully explain it" This sentence alone is worth the price of the book, because physicians are sometimes haled into court because of a dispute about the bill for services rendered, and at such a time an 'explainable" visiting list has often been the means of securing a decision in the doctor's favor This book is of convenient size well bound in red leather, and printed on good strong paper Provision is made for keeping a record of visits, vaccinations, confinements, addresses and a cash account

The Cheerfulness of Death By W W Keen M D LL.D Paper Price $0 15 Philadelphia The Griffith and Rowland Press 1912

This neat pamphlet contains, besides helpful extracts from Holmes, Tennyson and Newman words of Christian encouragement concerning the crossing of the bar and the life beyond It is well designed to minimize the apprehension which a patient may have on considering the approach of death

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Medicolegal

Operating Without Consent of Patient—Common Law Rule Must Be Adapted to the Employment of Anesthesia in Surgical Operations—Surgeon is Patient's Representative

(Bennan vs Parsonnet (N J) 83 Atl R 948)

The Supreme Court of New Jersey holds that a verdict for $1,000 damages for alleged malpractice cannot be permitted to stand being against the clear weight of evidence It says that the plaintiff applied to the defendant to operate on a rupture in his left groin that had been unsuccessfully operated on two years before by another surgeon On learning that the plaintiff was a poor man the defendant engaged to operate free of charge At the time fixed for the operation the plaintiff was placed under the anesthetic by two assisting surgeons who, when the defendant came into the operating room, directed his attention to a rupture they had just discovered in the patient's right groin which on examination and the employment of the usual diagnostic tests was determined by the three surgeons to be a serious menace to the patient and likely to cause his death should strangulation occur, dangers not to be apprehended from the rupture that had once been operated on The defendant thereupon operated on the more serious rupture intending to operate also on the other which he was prevented from doing by the patient's condition under the anesthetic The patient on being informed that the operation would be completed on a following day, apparently acquiesced but later declined to go on with the operation and brought this action against the defendant for assault and battery

The trial judge charged the jury that the operation was a legal wrong to the plaintiff unless he had consented to its performance explaining to them that such consent as to conditions discovered after the operation had actually commenced might be inferred from circumstances, and that it should be inferred if the condition thus discovered endangered the life or health of the patient leaving to them the question whether the condition for which the defendant had operated was of that character On the question thus submitted to the jury the evidence was overwhelming against the verdict The testimony of unimpeached medical witnesses that the rupture that was operated on was a serious menace to the health of the plaintiff and even to his life should it become strangulated was not even attempted to be contradicted On this point the testimony of the witnesses who had personal knowledge of the facts, was corroborated by that of a witness who was shown to be a surgeon of great experience and a recognized authority in his profession A verdict rendered in the face of this testimony could rest only on the assumption of superior knowledge by the jury The duty of the jury was to render a verdict on the evidence and that it did not do

The verdict must therefore be set aside without regard to whether the question that was left to the jury was or was not the precise question that should have been submitted to them although the court thinks that it was not It is true that the judge in his charge laid down the common law rule with substantial correctness but it is also true that the introduction of anesthesia into the practice of surgery has modified the application of the common law rule in certain fundamental respects of which the law must take notice The trial judge in his charge followed the opinion of Judge Brown in Mohr vs Williams, decided by the Supreme Court of Minnesota 95 Minn 261 which as annotated in 1 L R A (N S) 439 correctly presents the common law rule on the subject That rule is thus stated in 1 Kinkead on Torts p 395 "The patient must be the final arbiter as to whether he shall take his chances with the operation or take his chances of living without it Such is the natural right of the individual which the law recognizes as a legal one Consent therefore of an individual must be either expressly or impliedly given before a surgeon may have the right to operate In general justification of this common law rule, Judge Brown says in his opinion "There is logic in the principle thus stated for in all other trades professions or occupations contracts are entered into by the mutual agreement of the interested parties and are required to be performed in accordance with their letter and spirit No reason occurs to us why the same rule should not apply between physician and patient"

Without stopping to point out the fallaciousness of the premise that a surgical operation can be contracted for or performed according to plans and specifications it is enough to say that the entire foundation of the supposed analogy is swept away by the surgical employment of anesthesia which renders the patient unable to consent at the very time that the rule of the common law required that his consent be obtained for in those days the patient (such was the law of it) was a conscious participant in such surgical operations as were then performed and as his consent [illegible] the rule of the common law was [illegible] The surgical employment of [illegible] common knowledge not only [illegible] ing the patient's consent during the operation, but has also had other radical effects of which notice must be taken Thus it has rendered possible and of everyday occurrence surgical operations of a character and magnitude not dreamed of at the time the common law was in the making, and, as a matter of practical moment, has also advanced the period that marks the commencement of a surgical operation from the time when the patient's body is actually invaded by the knife to the time when the anesthetic is administered, or at least when the patient has succumbed to its influence The employment of anesthesia has also postponed to this same period of relaxation and unconsciousness the making of that complete and final diagnosis of the patient's condition that at common law was made at a time when he could be both informed and consulted By these considerations the scope of modern surgical operations has been greatly enlarged, and the legal rule applicable thereto extended beyond the emergencies of actual surgery to other matters more or less vitally affecting the patient's welfare To meet these changed conditions, the rule of law must, in the interest alike of the patient and the surgeon, be adapted to the changes that have been so wrought, chief among which is the unconscious state of the patient at a time when by the common law rule his consent must be obtained To meet this fundamental change in the condition of the patient, it is imperative that the law shall in his interest raise up some one to act for him—in a word, to represent him in those matters affecting his welfare concerning which he cannot act for himself because of a condition that has become an essential part of the operation

If such a representative has been chosen by the patient himself, the rule we are considering has no application, but, if no one has been so appointed, the law by its constructive power will raise up such a representative without which the welfare and even the life of the patient might be needlessly sacrificed To meet the requirements of the case, such representative should not only keenly appreciate the nature of the duty that is thus cast on him, but also be possessed of the knowledge and skill to perform such duty with wisdom and promptness He should also be one in whom the patient reposes confidence and on whose judgment he would presumably rely The surgeon whom the patient himself has selected alone fills all of these requirements, and hence on him the law would cast the responsibilities of this office by the legal implication that the patient intended him to act for him when he had made no other selection

This implication accords with those analogies of the common law by which prompt and timely aid to accidentally injured or unconscious persons is secured from those not expressly authorized to render it And I (the court's opinion was prepared by Justice Garrison) have no doubt that, should such an accident occasion a depression of the skull that rendered the injured person unconscious, the consent of such person to the necessary surgical operation would be implied at common law, although I find no such reported case A like analogy to some extent is found in the American decisions touching actions for compensation for services rendered to unconscious persons a topic on which the English cases are silent owing to that hallucinatory honorarium on which the learned professions in Great Britain are supposed to rely for their subsistence At bottom these analogies all rest on the maxim that one is presumed to accept that which is beneficial to him, a doctrine that, if applied to commerce and the transfer of property, should surely be applied where life and health are at stake

The conclusion, therefore, to which the court is led is that when a person has selected a surgeon to operate on him, and has appointed no other person to represent him during the period of unconsciousness that constitutes a part of such operation, the law will by implication constitute such surgeon the representative pro hac vice (for this disability) of his patient, and will, within the scope to which such implication applies, cast on him the responsibility of so acting in the interest of his patient that the latter shall receive the full benefit of that professional judgment and skill to which he is legally entitled. Such implication affords no license to the surgeon to operate on a patient against his will or by subterfuge, or to perform on him any operation of a sort different from that to which he had consented or that involved risks and results of a kind not contemplated As to such matters, the rule in question submits nothing to the judgment of the surgeon, who as the implied representative of his patient can under such implication truly represent him only in so far as he gives to him the benefit of his professional wisdom within the general lines of the curative treatment agreed on between them, unless, of course, a wider discretion has been accorded to him Within such general lines, however, much is necessarily left to the good judgment of the operating surgeon, just how much will depend on the circumstances of the individual case

If the surgeon transcends his implied authority as thus defined, the question of his skill and wisdom is irrelevant, since no amount of professional skill can justify the substitution of the will of the surgeon for that of his patient, but where this is not the case, and where the act done or the decision made in the interest of the patient is fairly within the implied duty and authority of the surgeon, the question for the jury is whether on the evidence it appears that such professional skill and wisdom as the patient was entitled to receive had been exercised by the surgeon in his behalf, not whether in the opinion of the jury the surgeon had acted wisely or whether the patient had been benefited

Such being the question for the jury, the admissibility of the technical or expert evidence on which it rests presents, as in other cases of relevancy, a preliminary question for the court which in the present case the trial judge rightly resolved in favor of the admission of such evidence. A ruling that the operation that was performed by the defendant was of a different sort from that to which the patient had consented would be based on too narrow a view The condition for the cure of which the plaintiff applied to the defendant was rupture He was therefore presumed to have contemplated all of the risks incident to an operation for such a condition Now rupture is simply a protrusion of the intestine. Whether it occurs on the right side or on the left the intestine is the same, the muscular wall is the same, and the operation is the same, and its dangers and the risks are the same

The real question is one to be settled, not by authority, but by reason, and its importance is such that it touches at a vital point the interests of the entire public, any member of which may at any time suffer in life or health by the establishment of a rule that will paralyze the judgment of the surgeon and require him to withhold his skill and wisdom at the very juncture when they are most needed, and when, could the patient have been consulted, he would manifestly have insisted on their being exercised in his behalf This concluding suggestion may perhaps be ethical rather than legal, but it does seem that in good morals a patient ought not, in his efforts to obtain a money verdict, to be permitted to repudiate the sound judgment exercised in his behalf by the surgeon of his choice, in whose judgment he would unquestionably have concurred

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Society Proceedings

COMING MEETINGS

American Physiological Society Cleveland Dec. 26-28
Southern Surg and Gynec. Assn Old Point Comfort, Va Dec. 17 19
Western Surgical and Gynec. Assn, Cincinnati Dec. 20 21

MEDICAL SOCIETY OF VIRGINIA

Forty Third Annual Meeting held in Norfolk Va Oct 22 25 1912

The list of officers elected for next year was given in The Journal, November 2, page 1636

Gastric and Duodenal Ulcer

Dr J S Davis, Charlottesville In one case of supposed stomach ulcer, with pain felt directly on swallowing, a prune seed was found imbedded in the lower esophagus Males predominate among gastric ulcer patients, text books to the contrary notwithstanding Hasty eating and worry predispose, and this makes doctors specially liable In one case the odor of hydrogen sulphid was present and the colon bacillus was found. Of forty five cases seen at the University of Virginia, twenty five were gastric, only three occurred in colored persons, two of whom were bright mulatto, the ages were from 18 to 65 The impregnation test is of some value, in this test the patient swallows the end of a thread and retains it in the stomach all night, then it is withdrawn and examined for blood, bile, etc Roentgen ray examination will show deflection of the peristaltic wave at the ulcer

Medical Treatment of Gastric and Duodenal Ulcer

Dr J G Nelson, Richmond Little that is new has been added in the last year or two Why should not incisions and needle wounds become ulcers? They do not There is the same neuropathic condition, the same neuritis or definite microbic invasion A local diminished resistance is now accepted as the most tenable theory A large percentage of patients recover if properly handled. Acute non perforating ulcer should be exempt from incision Practically rest, regulation of the diet, bismuth and epinephrin make up most of the treatment and of these rest is the most important The stomach wall must be kept still. Rectal feeding may be used, no long tube is required, but injection should be made slowly, at six hour intervals Concentrated solutions of sugar are irritating, but cane sugar less so than grape sugar Bismuth subcarbonate may be given in doses of from 300 to 400 grains, no constipating effect need be feared or chalk, 1 dram in a little water, may be given Treatment should be long enough, and the patient kept under observation a year or more For hemorrhage, morphin is the best agent

Surgical Treatment of Gastric and Duodenal Ulcer

Dr. Lomax Gwathmey, Norfolk Bear in mind the possibility of acute perforation, and obtain prompt surgical consultation if this occurs Acute hemorrhage is not always an indication for surgical treatment. Immediate gastrojejunostomy will control Repeated hemorrhage demands operation Experience makes me advocate early operation It is important to recognize symptoms, and not to give cathartics or morphin, masking the symptoms for the surgical consultant Right rectus incision gives the best results, and speed spells success Look for multiple ulcers

Pyloric Ulcer Secondary to Appendicitis, Colitis and Other Foci of Infection Within the Portal Area

Dr G Paul LaRoque, Richmond Bacterial cultures are invariably positive in tissues taken from chronic gastric ulcer Chronic appendicitis presents striking similarities, and also differences As to ages, the average for appendicitis is 25 years, for pyloric ulcer 34, for biliary calculi 39, for duodenal ulcer 45, and for gastric ulcer 48 Acute ulcer can be produced by experimental infection The first part of the duodenum soon will not be called duodenum at all, but part of the stomach It has no valvulae conniventes Pyloric ulcer is probably always primary

DISCUSSION

Dr W P Carr, Washington, D C Slowing of food in the stomach, shown by skiagram may be due to anatomic stricture or spasm of the pylorus, when the latter on operation no apparent change is seen in the pylorus It is produced by irritating substances in the stomach acting either at long intervals or constantly In all chronic ulcers there is some form of obstruction Patients may recover from acute ulcers but they nearly always recur The chronic ulcer is always surgical from the beginning The coincidence of appendicitis gall bladder infections etc with stomach ulcer does not show appendicitis, etc to be the cause, but vice versa Infection travels downward not upward

Dr J S Horsley Richmond One point I wish to emphasize is that chronic indigestion, unrelieved by medicines in about six or eight months is a surgical condition

Dr P S Roy Washington D C In differential diagnosis the hemoglobin index plays an important part I recently had a patient a neurotic girl of 22, with hematemesis, who had been treated by a distinguished Boston man I found that this bore relation to menstrual periods I treated only the nervous condition and the patient seems to have recovered entirely I do not think it common for cancer to start on ulcer

Dr I S Stone Washington, D C We see these associated lesions constantly in cases in which we operate such as fibroid tumors etc., when no suspicion of stomach ulcer exists

Dr. George Tully Vaughan, Washington, D C If symptoms are evident submit the case to medical treatment for six or eight weeks, if no relief follows then call in a surgeon It is a mystery why surgeons hesitate to operate in acute hemorrhage In nearly all other forms of acute hemorrhage they operate right away The obvious thing to do is to stop the hemorrhage in gastric ulcer as in typhoid perforation All agree as to the propriety of operating in chronic cases Pylorectomy is the ideal operation for this condition Take out the pylorus if your patient can stand it

Dr Kirkland Ruffin, Norfolk The important thing to decide is whether the digestive disturbance comes from conditions in the abdomen or other general conditions I operated in two cases of gastric disturbance in pellagra, the skin symptoms being dormant

Old and Modern Theories of Fetal Development, with Report of a Case of Boy with Three Legs

Dr Stuart McGuire Richmond This child was born with three legs of equal length, the third leg being attached to the pubes just above the penis The mother was satisfied that it was the result of maternal impression She was advised to wait till the child was 2 or 3 years old and then have it removed Nothing further was heard of the case until last summer when the youth was brought to me, 13 years old The leg had been carried doubled on the abdomen and held by a bandage There was no patella, and the foot had nine toes The leg was removed and the boy made a perfect recovery

Protection and Repair of the Perineum

Dr Greer Baughman, Richmond I deliver with the patient in the lithotomy position until the head is about to be expelled Then I bathe the vulva and thighs in sterile solutions, compound solution of cresol, etc give an anesthetic to the obstetric degree have the nurse extend the legs and evert the feet bringing the thighs as close together as possible with the heels in and the toes out, and I gather up the fasciæ and try to deliver between pains In delivering the shoulders I have to have more room so I separate the thighs a little The advantage of extending the thighs is that the skin from the buttocks is put at the disposal of the perineum The method was suggested by Dr Charles Robins If tear occurs I repair at once, using separate catgut suture for each tear, if the rectum is torn silkworm gut suture may be used

Indications for Cesarean Section

Dr. Virginius Harrison Richmond Placenta praevia eclampsia contracted pelvis tumors and cancer of the cervix vagina or rectum are the indications for the operation The vaginal route is not indicated in many cases in my opinion even if the child lives you generally have a badly torn perineum and the other way you have a clean wound to heal The vaginal route seems to be the choice of most operators in eclamptic cases Physical incapacity of a small uterus may be put down as a sixth indication Inaction is the worst possible policy in eclamptic cases

DISCUSSION

Dr R L Payne Norfolk Mortality statistics on placenta praevia are unreliable Repeated tamponade and repeated examinations are liable to infect The proper treatment of placenta praevia begins when the hemorrhage begins and admits of no delay We have no right to jeopardize the life of the mother while waiting for the viability of the child Statistics do not show so favorably as to the lives of mothers only a few more children are born of whom a large [illegible] centage die later The game is not worth the candle Statistics come largely from the hospitals Another argument against this is, if we establish this rule the mortality will be very high, because most patients cannot be taken to hospitals

Dr Stephen Harnsberger, Catlett I have had three craniotomy and three placenta praevia cases, the mothers all lived and the children all died In all six cases cesarean section should have been done It is a justifiable and proper operation

Dr. A B Hooe, Washington, D C Dr Harnsberger did not make it so emphatic as he should, the operation should be resorted to if speedy delivery is necessary, in eclampsia and placenta praevia especially When disproportion between the size of the head and the natural passages exists, cesarean section is always resorted to Perhaps epileptics are sometimes caused by the use of high forceps, or by the child remaining in the birth canal too long I condemn high forceps

Dr W E McGuire, Richmond Every case should be treated according to individual indications I have never seen a case in which placenta praevia was an indication for cesarean section Treatment should be given at the time of the first hemorrhage I have never done cesarean section for hemorrhage, but have done it for dystocia and eclampsia

Dr George Tucker Harrison, Charlottesville I use the abdominal way only in central implantation and in contracted pelvis I have tried the old game of morphin and eliminatives, but the sooner you empty the uterus, the sooner you save the mother

Treatment of Fracture of the Femur

Dr. A R Shands, Washington, D C The chief responsibility is to prevent shortening, and muscle spasm the chief factor to overcome, a spastic contraction of the most powerful muscles in the body Overcome the muscle contraction, hold the fragments in place and apply a spica from the nipple to the toes Make a skiagram to see if leg is in proper position If you cannot hold the fragments in apposition by reason of obliquity of the fracture, then operate

DISCUSSION

Dr S S Gale, Roanoke Recently I visited a hospital in Colorado, and there saw three or four cases of fracture of the femur I learned a point worth remembering, the use of a Buck's extension with excessive weight, 30 to 50 pounds, depending on the muscular strength to be overcome I have tried it in one case, in a muscular colored man with fracture near the neck of the femur My assistant put it up first, with 15 or 20 pounds Pain persisted I put on 50 pounds, the limb came down the muscle was paralyzed, and the man obtained immediate relief from pain I kept it on two weeks or more, when the muscle was thoroughly paralyzed, then I used a plaster cast I prefer to plate or wire by the open method Interposition of muscle tissue aften prevents union

Dr George Tully Vaughan, Washington, D C It is much easier to use this in children than in adults I have used Lane plates almost constantly in place of wire, they do not slip as wire does Nevertheless they are necessary evils Do not use them unless necessary

The Work of Health Departments

Dr E C Levy, Richmond The Virginia Public Health Association has the most important function of any body of men in the state Health officers should not only be trained in practical science but should be conversant with the business end as well Training as a physician does not train one as a health officer, but it will be many years before we have other than practicing physicians as health officers in the smaller places If he cannot acquire the information before, he must do it after he is inducted into office

A System of Segregated and Protected Prostitution

Dr P S Schenck, Norfolk The scope depends on the size of the town and the amount of funds The per capita taxation required is greater in small communities than in large, 50 cents per capita in the smaller, and 40 cents in the larger cities per year This expenditure pays large dividends in the way of inducing investments There are only two cities in the United States, so far as I know, in which a systematic inspection of the segregated area is in operation, these are Norfolk and San Francisco We require the landlady to report the arrival or departure of any inmate On complaint of infection we send a police officer and a doctor We have four inspectors There was so much complaint from the U S Navy of men becoming infected at Norfolk that we had to do this We invoked the aid of the police department and made a canvass of every house in the city We inspect and take swabs, if clean we issue cards good for fifteen days Each inmate is reported, and cannot "have company" unless she has her card posted in the room A fine of $50 and costs is imposed for failure to comply with these requirements, repeated frequently if need be If an inmate is found infected, she is put in quarantine and in charge of a physician If she cannot pay she is treated by the city Venereal diseases are not legally reportable here, but often are reported If complaint is made to us of infection, and the man will cooperate, we send a police officer with him He identifies the woman, and she is quarantined and treated Our system has proved eminently satisfactory

Dr E G Williams, Richmond Our work has reduced the number of typhoid cases in the state nearly one half, and the cases of tuberculosis are reduced about 4,000 Curiously diphtheria has apparently increased I think this is due to giving immunizing doses, which do not prevent the recipients from becoming carriers The number of cases has increased, but the death rate has decreased from 7 to 3.5 per cent

The Cause of Death in Intestinal Obstruction

Dr. Harvey B Stone, Baltimore Three classical ideas are maintained (1) general infection, (2) overwhelming nervous centers, (3) toxic absorption As to the third, ideas have been vague, and our experiments on dogs bear on this particular idea We were forced to the conclusion that the toxic material was the secretion from the mucous membrane, the obstruction leading to a perversion of its physiology, somewhat analogous to exophthalmic goiter These observations confirm clinical experience as to drainage We found that the toxin is much richer in the cases of high obstruction than in low To correlate our experiments, we were fortunate enough to obtain similar material from two cases in man This was as toxic as that from the dogs

Dr J S Horsley, Richmond I have always had a suspicion that this material was in the mucous membrane, but why does it act this way? Is it caused by the interference with the lumen or with the circulation? I think it must be with the circulation It has a practical bearing on, say, intussusception In two cases of this I resected, and the patients recovered, while in a reduction in two cases, one patient died with high temperature and cerebral symptoms

Blood Pressure

Dr. J W Preston, Roanoke I addressed a series of questions to five authors of leading text books 1 "Do your observations lead you to believe the normal blood pressure during pregnancy, preceding the onset of labor, to be higher than in the non pregnant?" B C Hirst and J C Edgar hold that there should be no rise, J C Webster states that there is usually a slight rise, E C Davis says that there is a uniform rise of from 10 to 30 mm 2 "Do you find toxemias leading to eclampsia, either in the presence or absence of albuminuria, uniformly accompanied by an abnormal rise of blood pressure?" All replied in the affirmative, including J W Williams, though Davis notes in certain desperate cases that it may be abnormally low 3 "Do you consider blood pressure estimation of material aid in the prognosis and treatment of such cases?" All replied in the affirmative, and Williams adds, "The higher the blood pressure in the preeclamptic state, the less amenable I consider the patient to prophylactic treatment."

KENTUCKY STATE MEDICAL ASSOCIATION

Fifty Seventh Annual Meeting, held at Louisville
Oct 28 31 1912

The President, Dr D O Hancock, Henderson, in the Chair

The officers elected were named, November 9, page 1726

Serum Treatment of Cerebrospinal Meningitis

Dr. Donald K. Clark, Louisville The curative effects of the serum depend on its early use This, in turn, depends on the early diagnosis All suspicious cases should be subjected to lumbar puncture, and the spinal fluid examined for the meningococcus By the early use of the serum the mortality may be reduced 15 or 16 per cent The introduction of fluids into the spinal canal is never devoid of danger No hesitancy should be felt about giving repeated doses of the serum A case that does not respond to four doses may respond to eight or more

Typhoid Carriers

Dr A. Dixon, Henderson All carriers should have individual articles which they use in every day life, such as dishes, basins, towels, etc Water closets used by carriers should receive regular and systematic disinfection, and carriers should be required to disinfect their hands after each visit to the water closet Thoroughly washing with soap and water suffices in carriers of some occupations, but if there is a possibility of the carrier handling foodstuffs, an antiseptic solution should be used in addition The administration of typhoid vaccine as a cure for carriers seems to give better promise than any other procedure

Blood Pictures in Tuberculosis

Dr. Everett Morris, Sulphur Blood pictures in pulmonary tuberculosis show, as a rule, a low percentage of hemoglobin, a normal or increased number of erythrocytes, a subnormal color index, an increased number of leukocytes, an increase in polymorphonuclears and a decrease in mononuclears, small lymphocytes and eosinophils as the disease progresses The transitional cells appear to remain constant without regard to stage, extent or activity of the infection. Leukocytic pictures in pulmonary tuberculosis portray more accurately the patient's resistive force than does the extent of the lesion Arneth's differential neutrophilic count is practical and no examination is complete in tuberculosis without the blood pictures

Infant Mortality, Its Causes and Prevention

Dr Henry Enos Tuley, Louisville As far back as 1893 it was shown by Eross, who studied the statistics of 1,430,056 children in sixteen large European cities, that 10 per cent of the children born alive die within the first four weeks of life This mortality was greatest on the first day and diminished each day as the child grew older Further, congenital debility is given as a cause of death in 54 per cent of infants which died within four weeks after birth Prof Irving Fisher states that in a series of 100 cases of premature births, 40 were preventable, of 100 children dying of congenital debility 40 might have been saved and of 100 children dying of venereal diseases 70 might have been saved

The question of feeding the new born infant is paramount in a discussion of this subject More cases of athrepsia, malnutrition and acute gastro intestinal disturbances with a fatal ending have their origin in an improper diet during the first few weeks of life, than from any other cause The community plan of caring for infant welfare is productive of the greatest good in the reduction of infant mortality Wilbur Phillips has estimated that the average cost of caring by preventive methods for the health of one baby for one year is $6 and the average cost to parents in Milwaukee to rear babies to the average age to which they die (about four months) of paying for confinement for baby carriages doctor's bills etc is $120 He estimated then that saving the death of one baby would pay the community for providing medical and nursing supervision for twenty babies for an entire year By establishing stations in the localities where statistics show the greatest morbidity and mortality to be which would be a center for dispensing clean, cold milk for caring for the mothers of all babies in the district, and for providing medical and nursing service, to be paid for by the city, many babies will be saved to society and a great financial saving brought about to the community

Self-Medication

Dr. J H Hohnstedt, Fort Thomas When the laity awakens to a realization of the harmful effects in the indiscriminate use of self prescribed remedies, and gives them up for those scientifically indicated after an intelligent diagnosis has been made, we may look forward to a better race in which all preventable diseases will gradually be eliminated The laity will learn that hygienic conditions and a properly prescribed remedy are essential to the preservation of health and the cure of diseases The admissions to our insane and blind asylums will gradually decrease in number and our criminally defective will become fewer, thus permitting our asylums to become hospitals and homes for the sick and aged

The Passing of Destructive Operations in Obstetrics

Dr Edward Speidel, Louisville Craniotomy is justifiable on the living child in undoubted cases of hydrocephalus Under all other circumstances delivery should be effected by abdominal cesarean section, if not possible by the vaginal route A destructive operation is necessary on the dead child in impacted shoulder presentations In all other cases, delivery should be attempted by version and in extreme cases of pelvic contraction even the dead child should be delivered by cesarean section, as the safest and most conservative method for the mother

Endometritis

Dr William L Mosby, Bardwell Curettage of the uterus should be done in the infectious and chronic forms of endometritis that have proved rebellious to local and constitutional methods of treatment When inflammation exists in the adnexa with immovable uterus, sensitive to the touch there is increased danger of lymphangitis or peritonitis The dull curet, like the uterine sound in these cases, is equally to be condemned as it opens up new avenues, supplies fresh material for infection and is powerless for good This important gynecologic operation should be done only under proper surgical environment and with sufficient surgical skill to promise the patient all that modern gynecology offers

Pellagra as a Public Health Problem

Dr O P Nuckols Pineville A commission should have power to prosecute all measures of protection of the public, by having the power to isolate and remove to the hospital all patients with pellagra, within the hospital district, in whom a positive diagnosis can be made All data connected with every case should be collected carefully and preserved, and each case made a special study The commission should act in conjunction with the state board of health and the county boards of health in carrying out all measures of general sanitation in the pellagra district The treatment carried out at the pellagra hospital should be of the most approved methods, including hydrotherapy and all other adjuncts that will be of advantage in arresting the disease Until pellagra patients are segregated and cease to be a source of further spread pellagra will grow and flourish but if it is dealt with promptly scientifically and humanely, it will soon be a relic of history

Pellagra in Eastern Kentucky

Dr. J H Hendren, Cary The use of Indian corn and its products as a food has nothing to do with the cause of pellagra or with the continuation of its symptoms even after it has been caused by some other agency There is probably an intermediate host but the evidence at the present time is not sufficient to incriminate the *Simulidae* of Sambon No physician is justified in diagnosing a case as pellagra until the eruptive stage has appeared Pellagra is not contagious in *utero* nor can it be transmitted from mother to child through the medium of mother's milk A large percentage of the cases appear to be associated with or are in the wake of some other disease as measles [illegible] The disease is caused by a microor [illegible] germs of the disease are located principally in the brain and spinal cord, and ordinarily do not circulate in the blood stream The cure for pellagra will be found in the use of arsenical compounds, possibly one not yet brought out, and most probably one used intravenously Until we know more of the cause of pellagra, segregation and prophylactic measures are useless The eruption of pellagra is not due to the germs of the disease *per se*, but to the toxins generated by them A large number of patients seem to develop an immunity to the disease, each attack growing less and less severe until the disease disappears All proof of its transmissibility from person to person seems negative, although there is strong evidence that it is a house infection

Acute Suppurative Otitis Media, Its Recognition and Treatment by the General Practitioner

Dr C T Wolfe, Louisville An important requisite to an early diagnosis is the ability to recognize a normal drum membrane An early otoscopic examination will show a red and thickened drum membrane which, as the suppurative process advances, bulges into the external auditory canal, depending on the amount of secretion within the tympanic cavity Soon the bulging seems to become particularly distinct in one or more segments, more especially in the posterior superior quadrant, in the more severe types large blebs may be present in the layers of the tympanic membrane An incision should be made at this time, extending from Schrapnel's membrane to the floor, through the bulging part This is imperative from the fact that should spontaneous rupture be permitted to occur, irreparable damage may be done to the drum membrane and other intratympanic parts from the pressure of the secretions This operation is not difficult and the details are readily learned We may look on the prognosis from a favorable point of view, provided that the case has been properly managed and has received modern treatment The treatment resolves itself into two parts The first consists in the alleviation of pain, evacuation of the pus from the middle ear, the maintenance of proper drainage and, if possible, the prevention of complications The second consists in the removal of such factors as are conducive to a recurrence of the disease

Diagnostic Errors in Diseases of Children

Dr Robert H. Moss, Henderson Every pediatrician of large experience knows that the pain of pleurisy and pneumonia in children is referred to the abdomen as frequently as to the chest. There are three things that a physician should always think of in the case of a child with an acute abdominal pain—pneumonia, appendicitis and intussusception—and I would emphasize most strongly the importance of careful and repeated examination of the lungs in all acute abdominal affections in early life The inhalation of foreign bodies often gives rise to puzzling clinical pictures The infant may have a suffocative attack, or paroxysm of coughing from which he quickly recovers, later on the symptoms of an acute bronchitis or pneumonia become manifest, and all too often the causative relation of the foreign body is unsuspected I treated an infant for a bronchopneumonia for about two weeks when one day during a severe paroxysm of cough, a wheat grain was expelled, after which recovery rapidly supervened

Rachitis is considered by some authorities to be more frequently overlooked than any other disease Doubtless one reason for the widespread failure to recognize this condition is that our attention has been generally centered on the changes, in other words, one of the terminal events It is practically agreed by all pediatricians that underlying the syndrome there is a dietetic error, with a superadded digestive disturbance Some authors contend that the accompanying indigestion is always present and is the chief contributory factor

Management of Puerperal Eclampsia

Dr W B Moore, Cynthiana Many of the measures advocated from time to time in the management of eclampsia are worse than useless Pilocarpin, at one time held in high esteem, is a dangerous drug in this condition It strongly predisposes to pulmonary edema The consensus of opinion to day favors rapid delivery The point in dispute is the method of emptying the uterus This must depend on the condition of the cervix, the time of pregnancy, the surroundings of the patient and the skill of the attending physician We believe that the greatest good to the greatest number will result from a campaign of education Instruct the women of this country that any variation from normal health during the period of gestation may be the beginning of a serious condition, and that the safety of each lies in following the instructions of an intelligent physician If this procedure is faithfully carried out, the management of eclampsia will be solved without the dangers of chloroform narcosis and surgical operations, in the desperate attempt to save these patients from an untimely grave

Management of Placenta Praevia

Dr Walker B Gossett, Louisville The first danger in placenta praevia is that of hemorrhage which may occur without any warning, the patient being at rest, or following coughing, sneezing, straining at stool or lifting The degree of collapse will generally depend on the extent of the bleeding The second danger is that of sepsis following the delivery, and these cases are more prone to puerperal sepsis, therefore absolute surgical obstetric asepsis must be observed, no objection can be made to the use of rubber gloves in these cases, as they have gone beyond physiologic labor and are in a pathologic condition The first treatment for ordinary domestic practice, when the bleeding has to be arrested before labor has begun and when the cervix is not dilated, is the tampon, plug both cervix and vagina When the cervix is dilated or dilatable to the extent of permitting two fingers being passed through it, I perform podalic version and deliver As to rupturing the membranes, this should be done to the side if possible, if not, go through the placenta Do not be hurried in the extraction of the child The child's thigh and breech should be pushed through the cervix by the uterine contractors, not dragged through, unless there is some reason for making a quick delivery I always depend on gauze plugging and my hand in these cases

Perinephritis

Dr. W L Cash, Princeton In the treatment of perinephritis, the patient should be put to bed and kept as quiet as possible throughout the attack Hot fomentations or an ice bag should be applied over the affected side, purgation should be by means of calomel, and urinary antiseptics should be given If these measures fail to bring about resolution, and suppuration becomes inevitable, a poultice may be used to hasten the formation of the pus When the abscess forms, the treatment is distinctly surgical There should be free incision, thorough exploration and adequate drainage The toxemia should be combated by generous diet, stimulants and tonics.

(To be continued)

COLLEGE OF PHYSICIANS OF PHILADELPHIA

Meeting held Oct 2 1912

The President, Dr. George E. deSchweinitz, in the Chair

The Spinal Cord in Pernicious Anemia

Dr. Robert N Willson, Jr It is well to remember that there exist spinal cord and perhaps brain changes in every case of true pernicious anemia, and that many cases that fail of prompt recognition, owing to nervous symptoms, would at once become clear if this fact were kept in mind. The likelihood that both the clinical picture and the cord degeneration are secondary to and the direct result of a definite toxemia has been hinted at, but the nature and source of this toxin and its method of action are still matters of speculation In my case there is a marked clinical indication of a pathologic intestinal process dating back to childhood and terminating only in the gastric crises which indicated, perhaps, the final influence of the auto intoxication on the spinal cord. It seems evident that the toxemia led to the pernicious anemia, the spinal cord degeneration and sclerosis, and the fatal termination of the case

Of no slight interest is the series of instances in the patient's near and immediate family connection of pathologic clinical pictures which suggested a definite relation between the pernicious anemia and combined sclerosis in my patient, the father's arteriosclerosis and uremic "stroke," the mother's aortic insufficiency and hepatic cirrhosis, with the renal sclerosis and angina pectoris of one aunt, and the pernicious anemia of another, to say nothing of the death of a third aunt (all three sisters of the mother) in an advanced stage of locomotor ataxia The working of syphilis through the gastro intestinal tract and its influence on the blood and on the spinal cord through a gastro intestinal autotoxemia have not been so thoroughly considered, and this theory is offered not without a certain measure of plausibility in the case under study

The Topography of the Valves of the Heart as Shown by the Roentgen Ray

DR. GEORGE FETTEROLF and DR GEORGE W NORRIS In the method adopted frozen sections of the thorax of formaldehyd hardened cadavers were cut into horizontal sections an inch in thickness Both sides of the valve leaflets of the exposed sections were painted with thick lead paint and photographed with the Roentgen ray Fifteen bodies were thus studied with a view to determining the normal relationship of the cardiac valves to the anterior thoracic wall Inasmuch as many of the bodies studied revealed pathologic topographic relations of the thoracic viscera, no normal standard could be established The communication is therefore made in the nature of a preliminary report with a view to describing a hitherto unemployed and entirely feasible method of studying the position of the valves of the heart in health and disease

Physical Examination of the Liver

DR JOSEPH SAILER Examination of the liver involves (1) The position of the upper border of liver dulness, (2) its contour, (3) the position of the lower border of liver dulness, (4) the position of the left border, (5) the character of the edge, (6) the character of the surface, (7) the palpability of the liver posteriorly which involves bimanual palpation, (8) the motility of the liver, and (9) the existence of pulsation

DISCUSSION

DR. HERMAN B ALLYN In one of two cases seen last winter the patient was a boy who had a large liver as the result of cardiac disease The boy developed late in the disease a fluctuating tumor on the surface of the liver at the usual site of the gall bladder This was supposed to be an enlarged gall bladder, but later there appeared also other nodules about the size of marbles The mass was distinctly fluctuating and, inasmuch as the blood gave a positive Wassermann, we looked on it as possible softened gummata But at autopsy we found cysts beneath the serous coat of the liver I never before saw nodules of this size and due to this cause The other case was that of a woman with secondary sarcomatous mass developing beneath the left border of the liver which moved freely with respiration It was found to be a mass connected with the omentum and not attached to the liver

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Medical Sciences, Philadelphia

November CXLII No 5, pp 625-780

1 *Tertiary Syphilis of Liver T McCrae Philadelphia
2 *Maltose in Infant Feeding J L Morse Boston
3 Bismuth Poisoning L M Warfield Milwaukee Wis
4 *Weight Curves in Typhoid W Coleman New York
5 *Observations on Scarlet Fever Diphtheria and Measles at Cincinnati Contagious Hospital A J Bell Cincinnati
6 Studies on Motor Functions of Stomach by Use of Gastric and Duodenal Fistulas Special Reference to Influence of Bitter Waters and Bitter Salts T R Brown Baltimore
7 More Common Forms of Cardiac Irregularity with Report of Case of Heart Block. T A Claytor, Washington D C
8 *Cryptogenetic Granulomatosis of Stomach O C Gruner and E J Mullaly Montreal Canada.
9 Alimentary Hypersecretion of Chronic Ulcer as Shown by Lactose Test Meal D Roberts Brooklyn
10 Intermittent Spinal Claudication Report of Two Cases F F D Reckford Philadelphia
11 Metastasis of Hypernephroma in Nervous System Jacksonian Epilepsy Caused by Such Lesion J Collins and R G Armour New York
12 Metabolic Observations on Amyotonia Congenita J C. Gittings and R. Pemberton Philadelphia

1 **Tertiary Syphilis of Liver** —Syphilis of the liver, McCrae says, presents a very varied clinical picture with prominent general symptoms in many cases, of which loss in weight is marked. The duration of the symptoms may be prolonged and there may be periods of improvement. Fever is a common occurrence There are features suggestive of hepatic disease in the majority of the cases Enlargement or tumor is the most common This may suggest other conditions, especially malignant disease General enlargement and the occurrence of nodules or large rounded masses are the most common A striking feature is the relatively marked enlargement of the left lobe as compared with the right The diagnosis may be obscured by other diseased conditions or the liver condition may be interpreted wrongly Ascites is sometimes a difficulty Knowledge of the features of hepatic syphilis and the therapeutic test are important aids Treatment can influence the syphilitic process, but not its results (cirrhosis amyloid)

2 Abstracted in THE JOURNAL, July 13, p 139

4 **Weight Curves in Typhoid** —The results of Coleman's observation are summarized in one sentence It is possible to maintain patients suffering from typhoid in weight equilibrium throughout the entire course of the disease by giving them sufficient food

5 **Scarlet Fever, Diphtheria and Measles** —During the last year observations were made by Bell on over 300 cases of scarlet fever The following summary indicates the findings in the so called classical symptoms and diagnostic signs Scarlet fever 315 cases Onset with vomiting 50 per cent , onset with headache, 4 per cent onset with sore throat 65 per cent , eruption, whole body, 46 per cent , eruption, partial 35 per cent , mouth pallor, 57 per cent rash on soft palate, 38 6 per cent , membrane on tonsils, 29 per cent , papillae enlarged 56 per cent , glazed tongue, 17 7 per cent anterior cervical glands enlarged 95 per cent , submaxillary glands enlarged 72 per cent , eruption gone from body, five and one half days, desquamation began in six and three quarter days, blood count, leukocytes average, 17,000, polymorphonuclears, average, 78 per cent., large lymphocytes average, 6.3 per cent , small lymphocytes, average, 10 1 per cent , eosinophils average, 2 per cent , albumin, 11 per cent , granular casts 4 per cent , hyalin casts, 2.5 per cent , blood cells, 4 per cent myocarditis, 6 per cent irregular heart, 3 per cent , murmurs 8 per cent , mastoiditis (no facial palsy in this series), 1 per cent , *arthralgia (all cases had an immunizing dose of diphtheria antitoxin)* 6 per cent acetone 49 5 per cent diacetic acid, 22 6 per cent , indican, 73 per cent temperature gone in five and two third days, nephritis, 2 per cent The average white count of patients who died was 17 262 Preponderance of the staphylococcus may have influenced all leukocyte counts

The so called Pastia's sign in this disease namely, the accentuation of the rash in the normal folds especially on the anterior surface of the elbow was not noticed except in a few instances, so that no significance has been attached to it Of like importance is the Rumpel Leeds phenomenon or the hemorrhages at the elbow from compression of the upper arm by means of a bandage

With the use of the ordinary antistreptococcic serum made up of streptococci not from scarlet fever patients Bell has noticed little benefit even in doses of 80 or 90 c c in twenty four or thirty six hours If he says it is used at all it should be made from the streptococci from blood throat or glands of scarlet fever cases The results with these stock vaccines were not brilliant Patients using vaccines had no local treatment Irrigations were employed for the others Except in one or two instances he could not see that the discharge from ears was modified by the vaccine, and on the whole those having local treatments ran a shorter course The dosage in each case was started with about 200,000 and each succeeding dose was doubled at intervals of from two to ten days according to indications This was carried up to 128,000,000 in some cases

True relapses or reinfections were not observed, but delayed rashes occurred in one or two instances Eighteen blood cultures were made during the year from scarlet fever patients Of these nine were negative In the other nine cases the *Staphylococcus pyogenes aureus* was recovered seven times and the *S pyogenes albus* twice The throat and nose cultures almost uniformly showed the presence of staphylococci, occasionally mixed with a few streptococci Twelve cervical glands of scarlet fever patients were aspirated with aseptic precautions in an effort to corroborate the claims of Vipond made in the spring of 1911, that he had found the specific organism of scarlet fever in the glands of patients suffering from this disease The cultures were sterile in nine cases, the *Staphylococcus pyogenes aureus* was isolated twice and the *B pyocyaneus* once

The following summary shows observations made on 76 cases of diphtheria Onset with sore throat, 84 per cent , onset with vomiting, 33 per cent , membrane on tonsils, 85 per cent , membrane on soft palate, 36 per cent , inflammatory swelling, 30 per cent , membrane gone on the average in two and seven elevenths days, temperature normal on the average in three and three quarter days, erythema (not from serum), 5 per cent , urticaria (not from serum), 14 per cent , otitis, 5 per cent , albumin, 12 per cent , adenitis, 47 per cent , paralysis, soft palate, 5 per cent , paralysis of other muscles, 4 per cent , myocarditis, 16 per cent , endocarditis, 28 per cent , slow pulse, 4 per cent , arthralgia, 2 6 per cent , acetone, 28 5 per cent , diacetic acid, 14 per cent , indican, 32 per cent , serum rashes, 16 per cent , antitoxin, average dose, 40,000 units, highest dose, 355,000 units, blood count leukocytes, average, 13,033 The mortality for diphtheria as reported up to Jan 1, 1912, was 3⅓ per cent , while for scarlet fever it was 0 5 per cent

8 **Granulomatosis of Stomach**—The authors conclude that linitis plastica is not a new kind of morbid process, but is the effect of some chronic infective agent whose nature has not yet been determined The process at work is often akin to the granulomatous process which occurs in mediastinal tissues and elsewhere, it is akin to the changes which occur in the course of some forms of tuberculosis and of diffuse sclerotic types of tertiary syphilis, and it is occasionally followed by the development of an epithelial growth, just as is sometimes noticed as a sequel to tuberculosis and syphilitic lesions The disease known as linitis plastica, or cirrhosis of the stomach, only demands a separate name because it is clinically a simulator of true carcinoma Its prognosis should be more favorable and its treatment by the surgeon more effective The small degree of epithelial overgrowth which may be regarded by some observers as carcinomatous, is not really any greater in extent than are the atypical proliferations of epithelium which are known to result from the subcutaneous introduction of certain irritant lipoid soluble bodies The suggestion is that the abnormal cells in this granulomatous tissue are pouring out substances which may excite the overgrowth of the glandular epithelial cells in the same way that many bodies (dimethylamidoazobenzol, amidoazotoluol, a naphthylamine, methylimidazol, indol and skatol, etc.) were found to excite epithelial overgrowth by Wacker and Schmincke in 1911 This renders the development of carcinoma as a secondary process on a preexisting (often long persistent) submucosal disease quite intelligible, and emphasizes the view which the authors would point out that the malignant change in this, as in "Hodgkin's disease," and in many lymphosarcomas (also in Paget's disease of bones), is not an inevitable sequence, but is superimposed by the succumbing of certain other tissues to the continued noxious action of abnormal cell products

Boston Medical and Surgical Journal

November 7 CLXVII No 19 pp 639 671

13 Clinical Study of Respiration D L Edsall Boston
14 *Pyelonephritis of Pregnancy and Puerperium J W O Connor Worcester Mass.
15 Adjustable Knee Support H W Marshall Boston.

14 **Pyelonephritis of Pregnancy and Puerperium.**—From the study of twenty nine cases and a review of the literature, O'Connor concludes that infection of the pelvis of the kidney invariably *involves the parenchyma Owing* to its anatomic relations the right kidney is the more vulnerable The disease is much more frequent than supposed, O'Connor estimates that it occurs once in every 3,000 cases Malnutrition, constipation and tonicity of the abdominal muscles are *predisposing factors*, tendency to renal abnormalities on the right, dextro torsion of the uterus and predominance of positions in the right oblique diameter favor the infection of the right kidney Infection by the colon bacillus is the most common type, direct transmission through the intestinal walls being the probable mode of entrance The pathologic picture shows the pelvis and ureter dilated with pus and miliary abscesses in and beneath the cortex The cardinal symptoms are smarting micturition, chills, fever, nausea and vomiting, pain in the loin *and elevation of pulse The urine is turbid*, purulent and albuminous Tenderness in the region of the kidney is always present Enlargement of the organ can be demonstrated in about one fifth of the cases Abortion and surgical kidney are the most common complications The diagnosis can generally be made on physical signs and urine analysis, the differentiation from appendicitis presenting the greatest difficulty Prognosis is usually good for the mother and less favorable for the child Treatment by rest, sedation, catharsis and urinary antisepsis has met with success The use of vaccines and pelvic lavage, if of any real value at all, entails dangerous delays and, being extremely technical, is beyond the scope of the rank and file of the profession Early operation in cases that assume a surgical aspect is to be strongly recommended

Bulletin of Manila Medical Society

September, IV No 9 pp 155 160

16 Pathology of Infant Apropos of a Necropsy F Calderon, Manila.

California State Journal of Medicine, San Francisco

November X No 11 pp 449 490

17 Value of Prisms in Eye Strain A S Green San Francisco
18 Labor in Moderately Contracted Pelves, with Special Reference to Cesarean Section H J Kreutzman San Francisco
19 *Operative and Postoperative Tonsillar Hemorrhage W S Franklin San Francisco
20 Thrombosis of Sigmoid Sinus and Jugular Vein from Direct Tympanic Infection of Jugular Bulb Report of Two Cases. H Hastings Los Angeles
21 *Some Opinions Concerning Tonsil Surgery C C Stephenson Los Angeles
22 Review of Recent Italian Eye Literature V F Lucchetti San Francisco
23 Patulous Anus Its Clinical Significance A J Zobel San Francisco
24 Stenosis of Duodenum Due to Gall Stones Operation Recovery W C. Voorsanger and C G Levison San Francisco
25 Cancer of Uterus E C Mann San Diego
26 *Pellagra in California V H Podstata and O C Willhite Livermore
27 Significance of Bacteria in Milk. S Levin Napa
28 Hereditary Pigmented Nevus A Solland Los Angeles
29 Complete Transposition of Viscera F W Birtch San Francisco
30 Case of Pyema W B Coffey and W T Cummins San Francisco

19 **Operative and Postoperative Tonsillar Hemorrhage**—Franklin says that no patient should be permitted to leave the operating table until both cavities are dry Every case of delayed primary or secondary hemorrhage he has encountered has given evidence, while on the operating table, of a tendency to bleed At present he sutures every case in which, after ten minutes from the enucleation, the bleeding has not been stopped He sees no possible objection to this procedure The deformity is no greater following sewing than due to the cicatricial contraction of the average healed case Following hemorrhage it is well to put the patient on a saline injection given by the Murphy drop method, and if the loss has been considerable the foot of the bed should be elevated, and morphin given subcutaneously He emphasizes the importance of treating tonsillar hemorrhage surgically, i e , by mechanically compressing the bleeding vessels The Mikulicz tonsil hemostat *is an old fashioned, barbarous instrument When applied it is*

extremely uncomfortable to the patient and has a constant tendency to become dislodged If held sufficiently tight to retain its position, it keeps the patient awake with saliva flowing from his mouth, pain over the wound and angle of the jaw and causes the sponge to adhere firmly to the cicatrizing surface Franklin does not consider it safe or good practice to rely on chemical means for control of bleeding It must be remembered that vaso constrictors cause a secondary dilatation of the blood vessels

21 **Tonsil Surgery**—Stephenson believes that a tonsillectomy is as severe, and should be classed, in point of gravity, the same as an appendectomy He holds that all hypertrophied tonsils without lesion or grave complications should be removed All tuberculous tonsils with lesions should be treated medically and never surgically All tonsillectomies should be performed under general anesthesia, unless the condition of the patient is such that a general anesthetic would be dangerous All tonsillectomies should be hospital cases, i e, the operation should be performed in a hospital All tonsillectomies should be followed by the passage of an adenoid curet All curettages following a tonsillectomy should be followed by the passage of the finger The hot wire ecraseur should never be used

26 **Pellagra in California**—The most important conclusion reached by the authors is that pellagra has been found to exist in three cases out of 180 consecutive cases admitted to a private sanatorium None of the three cases was imported to the western coast, but evidently originated there None of the patients belonged to the poverty stricken class of people In all cases, however, nutritional disturbances preceded a long time the development of definite evidences of pellagra In one case there is a definite history of long use of vegetable oils and this case happened to be the most acute, affecting the nervous system to the greatest extent and terminating fatally in the shortest time All three cases evidently originated without any infection from similar cases and there is no evidence that any one was so afflicted as a result of contact with them While it is not claimed that pellagra had been a causative factor in the mental or nervous breakdown of any of the three cases, it is evident that in every case it has greatly and in a detrimental way influenced the mental and nervous condition Cacodylate of sodium, tried in two of the three cases has not had any lasting beneficial effect on the disease The same is true of all other treatment attempted

Cleveland Medical Journal

October, XI, No 10 pp 693 762

31 Importance of Hospitals for Infants and Their Part in Prevention of Infant Mortality I E Holt New York
32 History of Legislation in Ohio Regulating Practice of Medicine L H Winch Cleveland
33 Treatment of Chronic Constipation E O Houck Cleveland
34 Open Air Schools of Cleveland J C Placak Cleveland
35 Gastric Ulcer J Phillips and A C Rowland Cleveland

Journal Lancet, Minneapolis

November 1 XXXII, No 21 pp 561 585

36 *Abdominal Incisions R E Farr Minneapolis
37 *Phthalein Test in Group of Medical Cases H L Ulrich Minneapolis
38 Our Duty to Public in Combat with Tuberculosis W A Kriesel Watertown S Dak

36 and 37 Abstracted in THE JOURNAL, August 31, pp 743 and 744

Journal of Cutaneous Diseases, New York

November XXX No 11 pp 653 700

39 *Case of So Called Prurigo Nodularis. J Zeisler Chicago
40 Acanthosis Nigricans with Report of Case A Schalek Omaha Neb
41 Inquiry into Efficiency of Sulphur Lotions O H Foerster Milwaukee Wis
42 Diseases of Skin in Relation to Hepatic and Renal Disorders. L D Bulkley New York

39 **Prurigo Nodularis**—Besides the general management by dietetic directions and the employment of internal antipruritics Zeisler made use of two rather powerful agents a 10 per cent chrysarobin varnish and repeated exposures to the Roentgen rays The latter had a curious effect Under their influence the hard keratomatous growths seemed to soften and become transformed into vesicular lesions, which would gradually dry up and then could be easily removed *in toto*, leaving the underlying skin practically normal

Journal of Indiana State Medical Association, Ft Wayne

October 15 V No 10 pp 419 464

43 Status of Medical Profession W F Howat Hammond
44 Section on Ophthalmology and Otolaryngology of Indiana State Medical Association C F Kelper La Fayette
45 Phthalein Test for Kidney Function F S Crockett La Fayette
46 *Diagnosis of Indigestion J V Reed Indianapolis
47 *Treatment of Pulmonary Tuberculosis with Artificial Pneumothorax. W A Gekler Rockville

46 and 47 Abstracted in THE JOURNAL, November 2, pp 1643 and 1644

Journal of Outdoor Life, New York

November IX No 11, pp 257 286

48 Sleeping Out with Comfort E. Cummins Hinton W Va
49 Clothing Bedding and Furniture for Outdoor Life T S Carrington
50 A Sanatorium Commencement A M Edwards Monrovia Cal
51 Convalescent s Balcony Boxes P Lathyrus

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Kentucky Medical Journal, Bowling Green

October 15 X No 20 pp 803 832

52 Pituitary Gland (a Pharmacologic Consideration) A F Simpson Louisville
53 Posture in Adolescent Period J D Trawick Louisville
54 Vesical Papilloma E S Allen Louisville
55 Cerebrospinal Meningitis D K. Clark Louisville
56 Embryonic Mixed Tumor of Kidney W H Wathen Louisville
57 Two Cases of Nasopharyngeal Polyps C C Hall Louisville

Lancet-Clinic, Cincinnati

November 2 CVIII No 18 pp 467 500

58 Infant Feeding M Ostheimer Philadelphia
59 Differential Diagnoses Reported from Cincinnati Tuberculosis Hospital C S Rockhill and K Dunham Cincinnati
60 Median Harelip J Ransohoff Cincinnati
61 Psychology of Sexual Inversion in Women D C McMurthrie New York
62 Present Status of Roentgenotherapy in Gynecology J Shields Cincinnati

Medical Record, New York

November 9 LXXXII, No 19 pp 833 878

63 I Some Data Concerning a Humoral Etiology of Spasmodic Asthma II Outline of Treatment in Accordance with Foregoing B Oettinger Denver Colo
64 *Chronic Lymphatic Leukemia M B Wesson El Paso Texas
65 *Hemoptysis in Tuberculosis Its Significance and Its Treatment T Frazer Asheville N C
66 Physician s Rôle in Preventive Medicine D B Hardenbergh Middletown N Y
67 Effect of Experimental Hyperthermy on Opsonic Activity of Blood Serum of Rabbit C A Rueck New York
68 Unfortunate Predicament of Medical Profession T Dixon Brooklyn
69 Manic Depressive Insanity A K Peterr Norristown Pa
70 Case of Myopic Refraction Relieved by Eye Education W H Bates New York

64 **Chronic Lymphatic Leukemia**—The urine in the case studied by Wesson has been reduced in quantity, dark yellow to orange in color, turbid, specific gravity 1 025 acid reaction no albumin or sugar There is generally, in a twenty four hour specimen a heavy, voluminous, brick red sediment of amorphous urates Not infrequently uric acid crystals are present A search for ferments in the urine disclosed the fact that there must have been some enzyme present (maltase) which had broken down the maltose molecule and that a proteolytic ferment was also present There was no amylolytic ferment present The presence of a fat splitting enzyme was suggested but was not very positive at first then it was quite evident that a lipase was present

65 **Hemoptysis in Tuberculosis**—Although there exists considerable difference of opinion as to the causes of hemoptysis Frazer says there is practical uniformity in the method employed in the treatment of this condition despite the use of drugs apparently antagonistic in their action and other minor details The first indication is to reduce blood pressure As hemoptyses are sometimes preceded by a sense of tightness in the chest or by the presence of blood streaked sputum it may be possible to prevent their occurrence by instituting [illegible] rest and by the administration of a drug such as the nitrites

—with the view of decreasing vascular pressure Either of the following may be used

℞	Gm or c c		
Sp nitroglycerin	1		♏ xv
Aquæ	60	or	℥ ij
M. S Dose ʒ j			

℞	Gm or c c		
Sodii nitritis	1		gr xv
Aquæ	60	or	℥ ij
M S Dose ʒ j			

A teaspoonful of either of the above may be given every four hours for two or three days

More commonly, perhaps, the patient receives no warning and the physician is summoned to treat an active hemorrhage In the presence of this condition the indications are three in number to secure absolute physical rest, to quiet the fears of the patient, and to lower the blood pressure, attempting in this manner to favor the formation of a clot, which is nature's method of checking hemorrhage This means that the patient must be put to bed and all unnecessary movements on his part must be avoided, he is not allowed to get up to attend to the demands of nature, nor is he allowed to talk A comfortable position should be assumed usually the semi recumbent posture (with one or two pillows under the head) is best, and the patient should be assured in a few words that there is little cause for apprehension Frazer's practice is to break one of the little "packages" of amyl nitrite, holding it for several minutes under the patient's nostrils The patient should also receive atropin gr 1/50 hypodermically, and this dose may be repeated two or three times within the next twenty four hours In place of atropin, nitroglycerin may be administered hypodermically in doses of gr 1/100, repeated at short intervals, at first every half hour or hour, for three or four doses, later less frequently After vasodilation has been obtained, more permanent effects may be secured by the use of sodium nitrite, gr j, every three or four hours Morphin, although used considerably in hemoptysis, should not be resorted to as a routine measure It is indicated if the cough be troublesome, but its field of greatest usefulness is in those cases in which excessive nervous irritability exists It is customary, at the onset of a hemorrhage, to place a light ice bag over the precordium, with a view to quieting the heart's action

There is no specific diet for patients with hemoptysis, but the amount given should be small and fluid in character (milk in small quantities and egg albumen are suitable), especially is it necessary to restrict the diet during the first twenty four hours While depletion through the intestines by means of catharsis has been advised and is theoretically indicated, it is better to wait twenty four hours before attempting to move the bowels on account of the exertion which this action imposes on the patient Also examination of the chest should not be undertaken, or should be restricted to auscultation, under no circumstances should percussion be practiced. As to the length of time that a patient who has had an hemoptysis should stay in bed, there exists considerable difference of opinion it is safer to insist on rest in bed for twenty four to forty eight hours after the expectoration of post hemorrhagic clots has ceased.

New York Medical Journal

November 9, XCVI, No 19, pp 933 992

71 Gall Stones P Syms New York
72 *Why Is Direct Transfusion of Blood Often a Failure? A L. Soresi, New York
73 Temperature After Perineal Section Under Spinal Anesthesia F L Keyes and D W MacKenzie, New York.
74 Gwathmey Woolsey Nitrous Oxid Oxygen Apparatus J T. Gwathmey and W C Woolsey New York
75 Some Considerations of General Anesthesia. C R Hervey Oswego N Y
76 Operative Treatment for Cancer of Breast. J S Brown Montclair N J
77 Cure of Prolapse of Uterus and Bladder by Plastic Operation L. G Baldwin New York.
78 Lane's Kink of Ileum C F Kivlin Troy N Y
79 *Nasal Deformity Corrected by Auto-Implantation of Septal Cartilage O Glogau New York
80 Cause Prevention and Care of Weak and Flat Feet W W Stevens Philadelphia
81 Mortality of Lobar Pneumonia in Alcoholic Subjects C K Stillman, Mystic Conn
82 Pustular Syphiloderm in Negress Simulating Variola J L. Kirby Smith Jacksonville Fla

72 **Direct Transfusion**—Soresi insists that transfusion should not be resorted to only when the patient is in extremis, surgeons should train themselves on animals in conservative surgery of the blood vessels before attempting transfusion in human beings, vein to vein method is to be preferred, and the use of a vein of the neck of the recipient is the only physiologically correct method to be adopted, except when not suitable during surgical operations In hemorrhages there must be a distinction between hemorrhages which can be completely checked and hemorrhagic diseases, in the former saline solution should be administered immediately as first resort and during or before transfusion, in the latter, transfusion should be resorted to before other liquids are introduced into the system, because the blood is used as a hemostatic and should not be diluted, in the greatest number of hemorrhages saline solution is sufficient to save the patient and transfusion should be resorted to only when the surgeon thinks that the hemopoietic organs of the patient would be unable to supply, in a reasonable time, the morphologic elements indispensable to life In diseases in which the blood is loaded with poisonous products, transfusion is very useful, provided that the central nervous system is not too seriously injured and blood is let out during or before transfusion is resorted to Transfusion is a great help to patients who are considered bad surgical risks, and it must be performed during the operation A vein for both donor and recipient should be used, anastomosing the distal part of the donor's vein with the proximal part of the external jugular of the recipient In this way the radial artery is saved and it is easier to find a donor Obviously there may be cases in which it is advisable to use the radial artery of the donor, and transfusion will be very satisfactory, but, when possible, vein to vein should be used, always preferring the external jugular for the recipient

79 **Correction of Nasal Deformity**—The septum in Glogau's case was prepared as for submucous resection by applying a 20 per cent cocain solution and a 1 to 5,000 epinephrin solution, with cotton pledgets to the Schneiderian membrane The usual incision was then made on the right side, but the knife was carried right through the cartilage toward the mucous lining of the left side without, however, injuring the latter The cartilage was then elevated from the mucous lining on the left side, and by means of a strong pair of scissors an incision was made at its upper and lower margins The cartilage flap, covered by the mucous lining of the right side, was thus attached at its posterior part only The nostrils were now plugged with a piece of cotton, and the back of the nose cleaned aseptically A 0 5 per cent cocain solution, containing a few drops of epinephrin, was then injected hypodermically at the middle of the nose toward the tip A transverse incision of about 15 mm was then made at the lower end of the nasal bones Through this incision, by means of a knife, the subcutaneous tissue was separated along the back of the nose down to the tip A sharp spoon was then introduced into this pocket and the cartilage at the tip of the nose curetted. The external wound was then covered by a piece of gauze The cartilaginous flap was now severed from its posterior attachment and put into a physiologic salt solution By means of a Bier's skin grafting knife, the superficial epithelial layers of the mucosa were then removed, and the cartilage, covered by its perichondrium, shaped by means of a pair of scissors to fit into the deformity The cartilage was then inserted into the deformity, and the transverse incision closed The wound was covered by a small piece of iodoform gauze and adhesive plaster The mucous lining over the bony part of the deviated septum was then elevated on both sides, and the bony deviation removed by submucous saws The septal mucous lining of the left side remained intact, while on the right side there was a loss of substance corresponding to the piece of cartilage removed with its right sided mucoperichondrium The nasal cavities were then painted with a 10 per cent. oily solution of iodin and packed in the usual way The intranasal packing was removed after forty eight hours, and the dressing of the external wound was changed every day After the fourth day

the ligature began to suppurate and the wound opened again. Healing by granulation took place. The inserted cartilage became permanently attached and the deformity is now considered to be corrected.

St. Paul (Minn.) Medical Journal

November, XIV, No. 11, pp. 549-600

83 *Conservative Surgery in Purulent Infections of Kidney. A. Schwyzer, St. Paul.
84 Some Phases of Gastric and Duodenal Ulcer. M. M. Ghent, St. Paul.
85 Estimation of Blood Pressure and Its Value from Diagnostic Standpoint. P. McKittrick, Eau Claire, Wis.

83. **Conservative Surgery.**—Schwyzer emphasizes the fact that the kidney parenchyma is not to be considered as free from bacteria even under normal conditions, and second that the kidney substance has a good resistance against bacterial invasion. In operating on the kidney, in draining and otherwise handling it at and after operation, it is well to have these facts in mind.

Surgery, Gynecology and Obstetrics, Chicago

November, XV, No. 5, pp. 523-637

86 *Nephrectomy Without Drainage for Tuberculous Kidney. W. J. Mayo, Rochester, Minn.
87 *Case of Intracranial Division of Auditory Nerve for Persistent Aural Vertigo. C. H. Frazier, Philadelphia.
88 *Arthroplasty. J. M. Neff, Spokane, Wash.
89 *Osteo-Arthritis of Spine. F. D. Dickson, Philadelphia, and A. H. O'Neal, Wayne, Pa.
90 *Experimental Study of Placenta Under Physiologic and Pathologic Conditions (Ferments, Vital Staining). R. T. Frank, New York.
91 *Unsuccessful Surgery in Disorders of Gall Ducts, Together with Consideration of Naunyn's Cholangiolitis. A. G. Gerster, New York.
92 Case of Pseudohermaphroditism. L. A. Greensfelder and L. C. Gatewood, Chicago.
93 Report of Exophthalmic Goiter Based on Experience of Members of the Chicago Surgical Society. W. Fuller, Chicago.
94 *Concerning Function of Corpus Luteum and Some Allied Problems. G. F. Dick and A. H. Curtis, Chicago.
95 Chorio-Epithelioma of Testicle. C. B. Keenan, Montreal.
96 Technical Points in Prostatic Enucleation. J. B. Squier, New York.
97 Roentgen Ray in Gynecology. R. L. Dickinson, Brooklyn.
98 Spinal Anesthesia with Report of Surgical Clinics. W. W. Babcock, Philadelphia.
99 Rhinophyma. J. C. Wood, Cleveland.

86. **Nephrectomy Without Drainage for Tuberculous Kidney.**—Mayo emphasizes that every effort should be made to remove the tuberculous kidney without the escape of its contents, and to secure this result an adequate incision is essential. The patient is placed on the sound side with a considerable degree of elevation of the loin. A vertical cut frees the twelfth rib from its posterior attachments and a long transverse incision mobilizes the lower wall of the thorax. In this manner a large kidney can be removed with ease. In some instances tuberculous material will have escaped spontaneously into the perirenal tissues before operation and in such cases it will not be possible to remove the organ without distributing more or less of the tuberculous infection throughout the cavity of the wound. It is in these cases particularly that drainage has resulted so unfortunately and Mayo believes has been an unnecessary procedure. The stump of the ureter is a source of possible infection in the wound, and many surgeons either remove the kidney and ureter completely at the primary operation or they suture the stump of the ureter to the skin for the protection of the wound. For a number of years it has been Mayo's practice to inject 10 to 20 minims of phenol (liquid 95 per cent.) into the ureter. This is distributed down through the lumen and a ureter thus treated will rarely give trouble later. He is convinced that in draining these cases they made a mixed infection possible which was responsible for many of the postoperative conditions. Experience has taught that drainage following operations for tuberculous lesions within the abdomen is unnecessary and usually followed by sinus and fistula; also that draining the cavity from which a tuberculous kidney has been removed gives rise to complications which delay or prevent healing and which may lead to the death of the patient some months later.

87. **Division of Auditory Nerve for Aural Vertigo.**—In this case the incision was made as for a unilateral suboccipital craniectomy. While the operation was followed by only partial relief, Frazier's experience with this operation and with many others in the posterior fossa encourages him to believe that this means of relief should be resorted to more frequently in the persistent and intractable forms of aural tinnitus and vertigo. Before the operation is undertaken, however, one should determine by every means of precision whether the case falls in the category for which this form of treatment is especially applicable.

88. **Arthroplasty.**—Neff reviews the history of arthroplasty, details the embryologic basis on which the operation is performed, the principles involved, the indications and contraindications for its performance, a consideration of the special joints, and then reports three cases, two of ankylosis of the knee and one of the elbow, in which he performed the operation successfully.

89. **Osteo-Arthritis of Spine.**—In diagnosing disease of the abdominal viscera the authors state that no examination is complete without a careful inquiry into the condition of the spinal cord and spinal column, including roentgenography.

90. **Experimental Study of Placenta.**—The evidence obtained by Frank in his investigation favors the view that the placenta is a passive organ for exchange, rather than an active organ of metabolism.

91. **Unsuccessful Surgery of Gall Ducts.**—Gerster opens and drains every dilated common duct. He says that palpation should follow, not precede, incision of common duct. An inflamed, thickened, adherent or shrunken gall bladder should be removed. All cicatricial deposits in gall bladder or in cystic duct justify removal of gall bladder. The presence of many small stones, even though the cystic duct is patulous, indicates that the gall bladder should be removed. The presence of a damaged gall bladder is not an aid but an impediment to exposure of the common duct. Absence of the gall bladder does not constitute an important adverse factor in the subsequent exposure of the common duct.

94. **Function of Corpus Luteum.**—The authors' results support the claim of Fraenkel that the corpus luteum is apparently essential for the development of the fetus during the early part of pregnancy. Attempts to produce an anticorpus luteum serum according to Beebe's method were unsuccessful. Autotransplantation of ovaries yielded success in a rather small percentage of cases. Homotransplantation was considerably less successful. Removal of both ovaries failed to cause either adrenal hypertrophy or microscopic evidence of increased physiologic activity of the adrenals. Attempts to produce experimental rickets by means of transplantation of ovaries were unsuccessful.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

October 26, II, No. 2704, pp. 1089-11[illegible]

1 *Passing of Morbid Anatomy. J. F. Goodhart.
2 Pellagra in British Islands. L. W. Sambon and A. J. Chalmers.
3 Mitral Stenosis; Peripheral Emboli Causing Partial Monoplegia with Symptoms Simulating Cerebral Embolism. C. C. Alderson.
4 *Sugar in Cerebrospinal Fluid from Cases of Meningitis. F. H. Jacob.
5 Anemia of Ankylostomiasis. W. Nicoll.
6 Flies and Other Insects as Carriers of Infection. W. Nicoll.
7 Opsonic Index in Plague Vaccination. J. St. J. [illegible].
8 Destruction of Alkaloids by Emulsions of Body Tissues. A. J. Clark.
9 Experimental Purpura. E. M. Cowell.
10 Operative Treatment of Fractures with Special Reference to Use of Intramedullary Peg. E. W. H. Groves.
11 Acute and Subacute Lesions Induced in Spinal Cord by Infection of Its Lymph System. D. Orr and R. G. Rows.
12 Results of Treatment of Inflammatory Diseases of Uterine Appendages. W. S. A. Griffith and C. Martin.
13 Chorio-Angioma of Placenta. R. W. Johnstone.
14 Rupture of Uterus in Connection with Cases of Concealed Accidental Hemorrhage. D. Shannon.
15 Excretion of Creatin in Pregnancy and Toxemia of Pregnancy. J. P. Hedley.
16 *Rashes Occurring During Puerperium. J. Byers.
17 Some Developmental Errors of Puberty. W. [illegible]
18 Etiology of Eclampsia. J. W. Ballantyne, J. H. Teacher and J. W. Smyth.
19 Treatment of Chronic Suppurative Ethmoiditis. P. Hajek and H. L. Lack.

1. See also *The Lancet*, October 26.

4 **Sugar in Cerebrospinal Fluid from Cases of Meningitis**—There is in normal cerebrospinal fluid a chemical substance which reduces Fehling's solution, and this is absent in some cases of meningitis and present in others There appears in the literature of the subject considerable confusion as to the cases in which it is present or absent, and considerable uncertainty as to its value Jacob's experience, based on only a small number of cases, has led him to a definite conclusion on this subject, and he considers such examination to be of definite value The method adopted is to boil together equal portions of cerebrospinal fluid and Fehling's solution in a narrow test tube and allow it to rest in a sloping position In the course of an hour there will be a marked yellow deposit forming a band on the lower side of the tube, and with a little practice one can form a fairly accurate opinion as to whether such band is normal in amount or diminished, where sugar is absent no deposit will occur

Jacob's results are as follows In nine cases of tuberculous meningitis sugar was present in apparently normal amount in one case, was present in diminished amount in seven cases, was present in markedly diminished amount in one case, this was taken only two hours before death In seven cases of pneumococcus meningitis sugar was absent in every case In three cases of streptococcus meningitis sugar was absent in every case In nine cases of cerebrospinal meningitis sugar was absent in two cases and present in diminished amount in seven cases In seven cases of poliomyelitis sugar was normal in amount in one case and slightly diminished in six cases In three cases of mixed septic meningitis, secondary to middle ear disease, sugar was absent in all three cases His conclusions are In pyogenic meningitis, pneumococcus, streptococcus and mixed infection, sugar is invariably absent In cerebrospinal meningitis sugar is absent in the acute stage, but may return in some degree as the infection recedes In tuberculous meningitis sugar is present, except in very rare cases shortly before death, in which stage difficulty of diagnosis rarely exists In poliomyelitis sugar is present

9 **Experimental Purpura.**—As regards the production of experimental purpura Cowell's results have been negative. He believes that the oft quoted positive experiments must, at any rate, not be accepted at present It is doubtful whether benzol has any effect on the blood platelets Although the lytic body at work in purpura is undoubtedly allied to a hemolysin, yet its action seems to be different, since in two fatal cases of purpura neonatorum Cowell has been able to microscope the organs without finding traces of free iron

10 **Operative Treatment of Fractures**—In certain cases, Groves says the method of using an intramedullary peg has great advantages over all others There are two different methods by which the pegs may be introduced into the bone The first kind of peg is comparatively short i e, about 24 cm in length It has a fixed crosspiece, transfixing its center, which keeps the peg from slipping too far into one end or other of the hollow bone One end of the peg is fitted into one fragment of the broken bone Then the other fragment is made to engage the projecting end of the peg, and by bringing the bone fragments into line with one another the muscular tension pulls the ends of the bone together over the enclosed peg, which serves thus to keep the fragments in exact apposition This type of peg can only be used in those cases in which the broken bone fragments are easily separated from one another When it is in position, owing to its shortness, it does not exercise much influence in maintaining the straight axis of the bone

In the class of fractures in which operation is demanded most imperatively, a peg like the one described cannot be employed simply because in these neglected or malunited cases it is impossible to separate the broken ends of the bone sufficiently to insert the peg For these cases Groves has used pegs which are drawn into their place by means of wire traction Each of these pegs is about 4 to 7 cm long, and is perforated in its center by a hole transverse to its long axis Along opposite sides of the peg run grooves in its whole length, and into these grooves the ends of the transverse hole open The size of the hole and groove is one which easily takes a fine flexible steel wire, which, when threaded through the transverse hole, lies snugly in the grooves, so that the whole peg can be slipped into one fragment of the bone, the other fragment brought into apposition, and then, by traction on the wire, the peg is pulled up into position, so that one half lies in one fragment and the other in the other As regards the thickness of these pegs, Groves has a set of thirteen sizes, varying from ⅛ to ½ inch, each size differing from the other by 1/32 inch, and also a set of drills for preparing the bone ends Each drill makes a hole, into which the corresponding peg will slip easily The object of drilling the bone should simply be to clear away any rough, outstanding spicules of bone, and not to actually enlarge the natural marrow cavity It is unnecessary to make the pegs fit very tightly, and the less drilling that is done the better

As regards the method of traction on the wire, in most cases it is quite sufficient to pull on the wire ends, which are rolled round pairs of forceps But if one has to work at the bottom of a deep wound, which makes it difficult to carry this out, the traction may be made by an instrument which winds the wire ends on to two revolving shafts, at considerable mechanical advantage

Groves has used intramedullary pegs made of various materials In comparing the merits of various materials, e g, bone, steel and aluminum, he states that the metal pegs are much the best for animal experiments, because those made of bone or ivory are very brittle, and are liable to be broken Magnesium has a very definite and distinct characteristic when used for the pegging of bones It is absorbed within a few weeks, and in the process of its absorption it greatly stimulates the callus production and the ossification of the same Of the other forms of absorbable bone pegs Groves has not yet found any which give good results with animal experiments He has used decalcified bone, horn, catgut, gelatin hardened with formol, and fibrin round an axis of catgut Of these horn is the best, but in all cases the softening takes place too early, that is to say, before any organic fixation has occurred, and then complete displacement takes place

16 **Rashes in Puerperium.**—Byers is of the opinion that scarlatina is rarely encountered during the puerperium When it does occur during the puerperal period it is, as a rule, a mild disease, that is, with the use of modern aseptic and antiseptic precautions What has been called "puerperal scarlatina" is almost always a form of septic infection with a rash resembling the eruption seen in true scarlatina From a person ill of scarlatina there may be conveyed to a lying in woman either (a) A true scarlatina, or (b) septicemia, arising from the secondary septic changes which are apt to take place in the throat, etc, in scarlatina The former (a) occurrence seems to be rare, while the latter (b) should be avoided by modern aseptic and antiseptic precautions

Journal of Obstetrics and Gynecology of British Empire, London

September XXII No 3 pp 119 190

20 Dusee His Forceps and His Contemporaries A Doran
21 Ventrofixation Its History Technic, Uses and Dangers, More Particularly as Regards Subsequent Pregnancies W M Fergusson
22 *Early Case of Chorionepithelioma Uteri W Thompson and M J Stewart.

22 **Early Case of Chorio Epithelioma Uteri.**—This case is chiefly of interest from the clinical point of view, being one in which a chorio-epitheliomatous uterus was successfully removed within five weeks of the passage of a hydatidiform mole Fourteen months later, the patient is alive and well, with nothing to suggest either recurrence or dissemination Microscopically the specimen was a typical chorionepithelioma malignum with a preponderance of cells of the intermediate type There was a striking preponderance in the tumor of intermediate or wandering cells, with a comparatively scanty formation of syncytium and Langhans' cells It is noted, however, that masses of the latter were found in some of the sinuses of the myometrium, and that this, according to Schmauch, is clear evidence of the malignancy of the growth Both ovaries were the seat of lutein cyst formation, a phe

nomenon which has frequently been observed in cases of chorionepithelioma and hydatidiform mole, and which is regarded by some observers as a possible etiologic factor

Journal of Tropical Medicine and Hygiene, London

October 15 XV No 20 pp 305 320

23 Pellagra Sandfly Protozoon Versus "Zeist Theory" L Nicholls
24 Experiments with Culture Media Suitable for Use in Tropical Countries C Wellman and A Hand.
25 Pigmented Maculae on Body R H Castor

Lancet, London

October 26, II, No 4652 pp 1129 1198

26 Passing of Morbid Anatomy J F Goodbart.
27 Mental Disorders G H Savage
28 Industrial Mercurial Poisoning as Seen in Felt Hat Makers F E Tylecote
29 *Operative Treatment of Fractures. A. J Walton.
30 Reflections on Gastrojejunostomy J O Conor
31 *Case of Localized Intracorpuscular Sulphemoglobinemia H Davis
32 Case of Myxedema R. S Novis
33 *Practical Use of Vaccine Treatment in Pulmonary Tuberculosis. B Hudson
34 Vaccine Treatment of Acute Pneumococcal Tonsillitis S P Shivdas
35 Unusual Pneumococcal Infection L. Bathurst.

29 **Operative Treatment of Fractures.**—Some of the essential features of using plates are emphasized by Walton He says that in fixing the plate there are many errors to be guarded against, and although the means of avoiding these errors constitute the most elementary rules of carpentry or practical mechanics, they are not uncommonly made when these arts are applied to surgery, and are responsible for a considerable proportion of the poor results The rules to be observed are At least three screws must be inserted, preferably two on either side of the fracture If only one be used on either side the plate acts as a perfect hinge and allows the fragments to swing round The plate must be strong enough not to bend or crack The drill must be chosen to fit the screw, It should be as wide as the shank only, and not as wide as the thread The screws must be short and with the thread cut right up to the head, otherwise the threaded portion will pass through the compact bone and be loose in the medullary cavity the screw then acting only as a nail, which will be loose and the union thus unstable. The screw should simply be inserted until slight resistance to rotation is felt If the hole be correctly drilled the screw will then be firm home If rotated further, the thread of the screw or the bone will only be torn off and the screw thus lie loose in the hole

When wiring is resorted to, two loops at least must be used, and the ends firmly twisted together with forceps Here again there are several simple mechanical points which it is important to observe A slight groove should be cut for the wire to prevent it slipping It need not completely encircle the bone The loops of wire should be placed either at right angles to the shaft of the bone or somewhat obliquely, that is, in such a manner that they tend to be more parallel with the line of fracture, for the tendency of these fragments is to override one another owing to the contraction of the muscles With this obliquity such a movement would be associated with a closer approximation of the ends, while if placed with the obliquity in the opposite direction the fragments would readily separate and override In twisting the ends of the wire it is essential that the two pairs of forceps with which the ends of the wires are grasped be so held that each piece of wire makes the same angle with the vertical otherwise one wire will alone be twisted round the other Not only is the grip imperfect, but the twisted wire will also rotate on its long axis, and thus is almost certain to break

Instead of a wire the ingenious instrument of Lambotte can be used This is shaped like a piece of wire split in its long axis, so that on section it forms a semicircle On the circumference a screw thread is cut A loop is passed round the bone, and when the two ends are brought together so that their flattened surfaces are in apposition they together form a cylinder with a thread cut on its outer surface A nut can then be screwed over them and the loop thus tightened to any degree The ends can then be cut off level with the nut The general subject of operative treatment of fractures is considered in detail.

31 **Localized Intracorpuscular Sulphemoglobinemia**—The face of Davis' patient, a female, 27 years of age instead of being of the normal pink tint, was stained a deep slate blue almost a blue black This hue prevailed all over the face and scalp and over the exposed part of the neck, but it could not be observed anywhere else, except at the bases of the finger nails The bases of the toe-nails were of the normal color The mucous membranes were unstained On the face the color was most marked over the nose, but it was quite obvious in the sclerotics, the cheeks and forehead were also affected but the ears to a slightly less degree than other parts The color could not be dispersed by pressure Inquiry into the history of the patient elicited the fact that she had had measles when a child She had not had scarlet fever, pneumonia bronchitis rheumatism or chorea There was no history of the application of carbolic acid preparations or of the ingestion of silver compounds at any time Her face had assumed its present peculiar tint eleven years previously, at the age of 16 without any apparent cause and had not changed since that time Otherwise the patient was well and physical examination was negative

In blood taken from the ear the characteristic absorption band of sulphemoglobinemia in the red end of the spectrum was present A specimen from the finger was normal The two facts that the peculiar color of the skin is so definitely localized, and, further, that the spectroscopic characters of the blood vary according to the situation from which it is taken, combine to make this case, Davis believes, quite unique The depth of color varies considerably from time to time, almost from minute to minute Again, after having been out in the grounds for an hour or two on a rather chilly day the fingers in addition to the bed of the nails, have been seen to be obviously affected Lately, too, the pigmentation has shown a tendency to spread and it seems probable that the curious localization will disappear and that ultimately the discoloration will become obvious all over the body Simultaneously with the deepening of the color and its spread it is interesting to notice that the patient has complained of not feeling so well

33 **Vaccine Treatment of Pulmonary Tuberculosis.**—In certain selected cases of pulmonary tuberculosis, Hudson believes that a course of vaccine treatment is certainly of great benefit There is however, always a large amount of uncertainty, owing to the difficulty of isolating the causal organism, but even if the vaccine does no good it at any rate never seems to do any permanent damage, and therefore is always worth trying The treatment may be used in conjunction with tuberculin Hudson emphasizes that any injection or other treatment is only an adjunct, and that the general hygiene, open air, climatic and tonic treatment systematic rest and good feeling should be always strictly enforced

Sei I Kwai Medical Journal, Tokyo

October XXVI No 10 pp 231 240

36 Acute Appendicitis Y Takaki

Bulletin de l'Académie de Médecine, Paris

October 8 LXVIII No 33 pp [illegible]

37 *Salvarsan in Local Treatment of Vincent's Angina C Achard
38 *Vaccination Against Typhoid at Avignon H Vincent
39 Resection of Six Feet of Intestine Connected with Mesentery Adherent to Tip of Infected Appendix (Forme d'appendicite non encore décrite) J Boeckel

37 **Local Treatment of Vincent's Angina with Salvarsan**—Achard's article was summarized in the Paris Letter p 1729

38 **Vaccination Against Typhoid**—Vincent states that in an epidemic of typhoid in the barracks at Avignon this summer there were 155 cases with twenty one deaths among [illegible] soldiers who were not vaccinated while among the [illegible] soldiers who had submitted to vaccination not a single case developed and no gastro-intestinal disturbances of any kind were observed This does not include the civil population in which the epidemic prevailed widely 614 cases having been reported in a population of 49,000 The number was probably more than twice this in reality the mortality was [illegible] The epidemic is stated to have been beyond question water borne

Journal de Médecine de Bordeaux

October 6 XLII No 40 pp 629 644

40 Muscular Disease Attributed to Trauma (De la conduite des experts en présence des myélopathies systématisées attribuées à un traumatisme) H Verger

Lyon Médical, Lyons

October 13, XLIV No 41, pp 589 636

41 Familial Hemophilia Failure of Autoserotherapy F Leclerc and J Chalier

Presse Médicale, Paris

October 19, XX, No 85 pp 853 864

42 *Contralateral Nerve Anastomosis from Experimental and Clinical Standpoint D Maragliano
43 Spontaneous Pneumothorax in Tuberculosis F Dumarest and C Murard
44 The General Biologic Laws of Diuresis A Martinet

42 **Contralateral Nerve Grafting**—Maragliano describes the technic with which he grafted the left sciatic nerve on the right, in dogs, passing it through a tunnel under the skin After several months the gait became apparently normal In 1909 he applied the same technic on a child of 2 with spinal paralysis following epidemic poliomyelitis He isolated the femoral nerve and its branches, a little above the knee, and severed the right femoral nerve 1 cm above Poupart's ligament after electric tests had shown the absence of all reaction He then drew the left femoral nerve through a tunnel and sutured it to the peripheral stump of the right femoral nerve Improvement gradually followed and by the eighteenth month the child was able to stretch his leg while the left side showed no loss of functioning The right leg is still too weak to support the weight of the body, but the progress realized to date promises that this will be possible in a few months The results attained are the more remarkable as the nerve branch utilized was of smaller caliber than the paralyzed nerve trunk to which it was to bring new life Equally good results were obtained in two other cases of the kind, and he thinks the sciatic nerve is even better adapted to this contralateral grafting than the femoral

Revue de Médecine, Paris

October XXXII No 10 pp 761 864

45 Tuberculous Nature of Ascites with Cirrhosis of the Liver G Roque and V Cordier To be continued
46 *Classification of Acute Forms of Tuberculosis H Gougerot
47 *Nitrogen Metabolism in the Tuberculous (Les échanges azotés chez les phthisiques) H Labbé and G Vitry
48 *Artificial Pleurisy in Treatment of Pulmonary Tuberculosis I Cecikas.
49 Recovery from Tuberculous Meningitis (Méningite tuberculeuse guerie) I Cottin

46 **Acute Forms of Tuberculosis**—Gougerot refers in particular to the form of acute tuberculosis characterized by the presence of tubercle bacilli in the blood and the absence of definite tubercle formation The clinical symptoms are those of typhoid, but the daily temperature variation is apt to be greater, the Widal reaction is negative, and there are no rose spots In case of typhoid without rose spots, this "typhobacillosis," as Landouzy calls it, should be suspected and the blood examined for tubercle bacilli and tested by animal inoculation

47 **Nitrogen Elimination in Tuberculosis**—Labbé and Vitry state that the total nitrogen excreted in the urine of tuberculous patients is lower than normal, it averages 8 gm in twenty four hours The urinary coefficient is lower than normal, which shows that more nitrogen than normal is being excreted in some other form than in urea This is verified by studying the purins and the ammonia which are both excreted in somewhat larger quantity than normal The increase in purins is accounted for by the fact that the abnormal destruction of the patient's own tissues sets free an increased amount of nucleins All these urinary findings increase in degree with the progress of the disease

48 **Artificial Pleurisy in Treatment of Pulmonary Tuberculosis.**—Cecikas reports two tuberculosis cases in which he produced artificial pleurisy by injection of turpentine, with resulting marked improvement in both instances He believes that the products of the inflammation thus elicited are antagonistic to the tubercle bacillus, and that the good results obtained with artificial pneumothorax are due to this cause and not to the compression of the lung

Semaine Médicale, Paris

October 23 XXXII No 43, pp 505 516

50 The Esmarch Bandage (Ce qu il faut penser des dangers de la bande d Esmarch) F Lejars

Beiträge zur Geburtshilfe und Gynaekologie, Leipsic

XVII No 3 pp 287 398 Last indexed July 13, p 150

51 The Obstetrician Crab (Ein Namensvetter im Tierreich) E A Kehrer
52 Deformity from Lack of Amniotic Fluid (Ueber Oligohydramnie mit konsekutiver Verunstaltung der menschlichen Frucht.) W Biber
53 *Pelvic Tuberculosis in Women (Genital und Peritonealtuberkulose mit bes Berücks. von 82 Fällen der Heidelberger Universitäts Frauenklinik) S Wolff
54 Blood Pressure and Prognosis with Gynecologic Operations. A Gross.
55 Osteomalacia Improved by Porro Operation One Case F Suzuki
56 *Rupture of Uterus After Cesarean Section A Wyss.
57 Case of Primary Chorionepithelioma of the Ovary (Zur Frage des Epithelioma chorioectodermale) R Klotz

53 **Genital and Peritoneal Tuberculosis**—Wolff gives ten four page tables showing the details of eighty two cases of genital or peritoneal tuberculosis in women In 68 3 per cent both the genital organs and peritoneum were involved In only 7 3 per cent were both oviducts alone the seat of the tuberculous process, and in 2 4 per cent one tube alone No instance was found of a tuberculous process in the ovaries alone, but this occurred in the uterus in 3 6 per cent Five of the eighty two were girls under 20 but most of the patients were between 20 and 35 Only 37 per cent of the total eighty two women had normal menstruation In thirty one cases the diagnosis had been erroneous In the fifty five operative cases, 75 per cent of the patients were living two years later and only 52 per cent of the twenty one treated by conservative measures alone, while only the mildest forms of the tuberculosis were given conservative treatment The final outcome with operative treatment is so satisfactory that it imposes the necessity for surgical measures in every well established case of genital or peritoneal tuberculosis in women The operative measures should be supplemented by the usual general ones, and Wolff agrees with Franqué that there is no sense in abstaining from the curative measures on the tuberculous pelvic organs just because this does not cure tuberculous processes elsewhere in the organism The operation relieves the patient from her local disturbances in the pelvis and thus accomplishes at one stroke what may require years under conservative measures if ever attainable by this means

56 **Rupture of Uterus after Cesarean Section.**—Wyss reports two cases of this mishap during a pregnancy following delivery by cesarean section, and compares them with forty two similar cases from the literature In eight cases on record the old cicatrix parted, in nine others a fistula developed, in three the abdominal walls ruptured, and in eight the cesarean section wound burst open a few days after it had been sutured In two other cases in Wyss' experience a woman died from paralysis of the bowel following the bursting open of the laparotomy wound The various experiences related emphasize the necessity for limiting cesarean section to the cases in which it is strictly needed, and, where it is indispensable, the necessity for applying at the same time some operative measure to prevent further conception After a woman has had cesarean section done, she should go to a maternity during the last weeks of following pregnancies so as to be under constant medical supervision

Berliner klinische Wochenschrift

October 21 XLIX No 43 pp 2017 2064

58 Therapeutic Action of Metals in Cancer (Wirkung der Metalle auf Krebs) H R Gaylord (Buffalo)
59 Non Inflammatory Necrosis of the Liver from Venous Stasis (Ueber die bei schwerer venöser Stauung auftretenden nichtentzündlichen Lebernekrosen mit Icterus) H Oertel (New York)
60 *Principles of Organotherapy A Münzer
61 *The Predisposition to Tuberculosis (Der Thorax phthisicus und die tuberkulöse Disposition) C Hart
62 Pathology of the Diaphragm F Buttersack
63 *Intermittent Claudication (Dysbasia arteriosclerotica und Plattfuss.) Brandenstein (Fall von Angiosklerose der Darmarterein mit intermittierendem Hinken) G A. Friedmann (New York)

64 Lead in Lithographs (Sind bleihaltige Abziehbilder giftig?) T Weyl
65 Little Influence from Roentgen Ray Exposures on Hemolytic Complement of Guinea Pig Serum L Fränkel
66 Serodiagnosis of Staphylococcus Disease G Wolfsohn
67 Technic for Obtaining Blood for Laboratory Examination W Lintz.
68 Nomenclature of Salts R Sodemann

60 **Principles for Successful Organotherapy**—Münzer comments on the well established fact that the ductless glands seem to work in pairs, one of each pair stimulating and the other checking certain functions By operative removal of the gland that does the checking, the stimulating gland is left in full control and the function of which it has charge receives only the stimulating activation The logical conclusion is therefore that before utilizing glands for organotherapy their antagonists should be removed He cites as an example Cushing's recent research on carbohydrate tolerance before and after removal or exclusion of the posterior lobe of the hypophysis cerebri His experiments all demonstrate that the posterior lobe has an inhibiting action on the oxidation of carbohydrates and is thus an antagonist to the pancreas which, we know, is concerned in this oxidation of carbohydrates For organotherapy, therefore, a pancreas should be used which has been previously activated by removal of its antagonist, the posterior lobe of the hypophysis Only in this way will organotherapy accomplish what has been hoped from it, and its use be extended

61 **Predisposition to Tuberculosis**—Hart discusses the constitutional and acquired factors liable to induce a predisposition to apical disease, especially the mechanical injury from lack of proportion between the anatomy and the functioning of the upper aperture of the thorax He lays special stress on the prophylactic influencing of the growing thorax in the young This would render Freund's chondrotomy unnecessary except in the cases of pure age ossification, here it is of great importance and benefit

63 **Flat-Foot with Intermittent Claudication**—Brandenstein reports three cases of this combination in men in the forties The disturbance from the flat foot had only been aggravated by insoles, as they impeded the circulation in the foot still more In these as in a number of other cases not reported here, great benefit followed application of measures to act on the circulation alone, superheated air, potassium iodid and heart tonics Objectively no modifications could be detected, but the patients were relieved of almost all their disturbances, even in the cases free from a history of syphilis The trouble in this combination of arteriosclerotic intermittent claudication and flat foot is generally attributed to the latter alone, and the more serious vascular affection is overlooked or regarded as of no moment, so Brandenstein lays special stress on the necessity for being on the lookout for it in persons with flat foot who are no longer young

Correspondenz Blatt für Schweizer Aerzte, Basel

October 20 XLII No 30 pp 1129 1176

69 *Exophthalmic Goiter (Morbus Basedow) A Oswald

69 **Nature of Exophthalmic Goiter**—Oswald presents a summary of what has been done recently in the line of research and theory on the subject of Basedow's disease and crystallizes out of it the conception that exophthalmic goiter is the result of both a thyroid and a nervous factor The thyroid secretion acts on both the sympathetic and the cerebrospinal nerve systems This has been abundantly proved by animal experimentation, to which Oswald has some unpublished experiences to contribute Increased secretion in the thyroid has no clinically appreciable injurious influence on the two nerve systems when they are sound But when one or the other of the two great nerve systems is irritable or diseased then the products of excessive thyroid functioning irritate the irritable nerve system If this happens to be the sympathetic nerve system then this in turn stimulates the thyroid and heart to extra functioning A vicious circle is thus set up, constantly aggravating the morbid conditions and we have the clinical picture of exophthalmic goiter If the thyroid gland is then removed this puts an end to this secondary retro active morbid influence magnifying the irritation from the original cause The sympathetic nerve system is thus freed from the multiplier of its irritation and it gradually grows less irritable under the rest and hygiene which are an essential adjuvant in operative treatment of exophthalmic goiter This conception of the nature of Basedow's disease explains why thyroid and iodin treatment do harm in this condition They both have an injurious influence on the nervous system the first directly the second indirectly Exophthalmic goiter developing after infectious diseases is due to the same mechanism, it does not occur except in persons with predisposed nervous systems Endemic goiter very rarely passes into the Basedow type the predisposition on the part of the nervous system seems to be exceptional in the regions where simple goiter is endemic Without the predisposition on the part of the nervous system it is impossible to elicit exophthalmic goiter by feeding thyroid extract None of the changes found in the goitrous thyroid is characteristic for the Basedow type The most recent development in the Basedow question is the cooperation of the thymus in the process Oswald regards the thymus as merely a further aggravating multiplier of the original morbid condition When there is a persisting thymus the individual is in double danger from his Basedow there is a general constitutional anomaly which manifests itself in the persisting large thymus and possibly hypertrophy of the lymphatic apparatus This indicates low resisting powers the organism is less resistant to internal and external injurious influences, especially those affecting the heart. Removal of the thymus by thus abolishing one of the multiplying factors helps to break up the vicious circle, and this alone has been known to cure the exophthalmic goiter in some cases He states that a large persisting thymus is always found in those who die of exophthalmic goiter or during operations on the thyroid

Deutsche medizinische Wochenschrift, Berlin

October 17, XXXVIII No 42 pp 1961 2008

70 *Dietetic Treatment of Polyuria (Ueber die Diätbehandlung des Diabetes insipidus und ähnlicher Polyurien) H Strauss
71 Nature of Tuberculin Reaction (Wesen der Tuberkulinreaktion) F Meyer and K [illegible] Schmitz.
72 *Heart Disturbances with Endemic Goiter (Die Herzstörungen bei endemischem Kropf) J Bauer
73 *Improved Apparatus for Recording Venous Pulse (Neuer Apparat zur Venenpulsaufnahme) Henkel
74 *Changes in the Pancreas with Alcoholism M [illegible]auer
75 *Changes in Urine with Albuminuria Induced by Position (Lordotische Albuminurie und Titrationsazidität des Urins) E Fränkel
76 *Analysis of the Urine (Zur Harnanalyse) I Bergell
77 Percussion in Diagnosis of Fracture of the Skull (Die perkutorische Diagnose von Schädelbrüchen) W Goebel
78 *Treatment of Traumatic Gangrene of Leg or Arm [illegible]
79 Scleroma in Prussia (Neue Skleromfälle aus Ostpreussen) [illegible] Gerber

70 **Dietetic Treatment of Polyuria**—Strauss has long been calling attention to a special feature of diabetes insipidus namely the inability of the kidneys to produce urine of a concentration corresponding to the intake of solids The kidney is able to eliminate the solid elements only by washing them out in an excessively large output of urine In doing this the tissues get dried out This explains the benefit from a salt poor diet in diabetes insipidus in some cases When restriction in the amount of salt in the food fails to influence the polyuria then the amount of fluid taken should be restricted at the same time Restriction of both salt and fluid is not necessary unless the salt poor diet alone fails to have the desired effect He comments on the excessive drinking of fluid in many cases of diabetes insipidus as a bad habit restriction of the intake of fluid has a good educational influence The thirst can be relieved sometimes with fruit or rinsing the mouth with cold water or by sipping a little lemonade or carbonated water The absence of phenomena on the part of the heart and the comparatively normal blood pressure show he says that diabetes insipidus is not [illegible] very serious The injury of the cardiovascular system from transporting such large amounts of fluid is not so severe as [illegible] believe The intake of fluid in the evening should be [illegible] to avoid the interference with sleep He thinks that the protein intake can be reduced to 60 or 70 g [illegible] a functional neuros[illegible] or ar[illegible] is [illegible] had better be avoided

72 **Heart Disturbances with Goiter**—Bauer writes from Innsbruck, where goiter is endemic, to say that heart disturbances with simple goiter are common there but they differ from the usual forms of goiter heart The main findings are an accidental systolic murmur, more pronounced over the pulmonary artery, an accentuated second sound and slight enlargement of the heart dulness toward the left The apex beat is normal, the pulse not accelerated and there is not much subjective disturbance He regards these heart findings as due to thyroid intoxication, and calls them the torpid form in contrast to Kraus' overexcitable type of thyroid heart

73 **Venous Pulse Curve**—Henkel has devised a little apparatus which consists of a stand with three legs holding on the vein the pad connected with the drum The three legs of the stand are of hollow rubber and are held firm on the skin by vacuum action, the air being pumped out of them with a rubber bulb The little tripod thus fits tight to the skin and moves with it, while the recording pad can be adjusted to determine the vein pulse without interfering with the arterial

74 **Changes in the Pancreas in Alcoholism**—Lissauer has found in twenty four cases of gin liver that the pancreas showed more or less similar changes His findings confirm those of Weichselbaum in twenty seven similar cases The importance of this gin pancreas" is evident in the development of diabetes mellitus in persons addicted to liquor

75 **Lordotic Albuminuria**—Fränkel examined twenty one children with spinal disease and found eight free from any trace of albuminuria, while it was evident in the others In twenty two other children with albuminuria he found only eight without some anomaly in the spine Among other points learned from this research is that the total acidity increased in the children with albuminuria induced by lordosis, unless the children had been given beforehand a dose of 4 gm sodium bicarbonate It is possible, he says, that the elimination of albumin in these cases is due to abnormal production of acid It might be wise to give an alkali occasionally in addition to hygiene and tonics to combat the constitutional weakness Some of the children were pale and restless and complained of headache—all improving under the alkali In one child the albuminuria followed a scarlet fever nephritis, this scarlatinal nephritis never showed any influence from the administration of the alkali

76 **Test for Nitrogen in the Urine**—Bergell gives the details of a technic which he has found very useful, simpler and more reliable than the Kjeldahl tests, for determination of the nitrogen in the urine A quartz test tube is required and in this the nitrogen is determined after calcining with calcium oxid

78 **Treatment of Impending Gangrene of Extremities**—Noesske reported in 1909 the excellent results of slitting the end of the finger down to the bone and applying a suction cup when the part was threatened with gangrene By this means the stagnating venous blood was drawn out of the tissues and the arterial blood streamed in to take its place, thus restoring the circulation and warding off further trouble Liek has applied the same principle in a number of cases, especially pedunculated flaps when gangrene seemed inevitable, but he never found it necessary to go to such extremes as the above, numerous minute incisions proving all that was necessary and healing without leaving disfigurement This was particularly evident in a recent case in which a young man had had his right ear sliced nearly off It was connected with only a bridge of skin 1 5 cm wide Liek sutured it in place but the ear was blue and cold until he made fifteen small incisions, both on the front and rear, radiating from the meatus Each incision was 3 or 5 mm long, at first they did not bleed but after a time drops of dark blood began to ooze out and the ear began to resume its natural tint Gangrene was thus warded off and the ear healed in place He did not apply the vacuum cup, and he thinks that even for the fingers these minute incisions might give equally good results as Noesske's single deep incision while there would be no resulting disfigurement or impairment of function Liek urges exarticulation of the fingers as giving better results than the deformed stump left after serious injury of a finger Working men are less incapacitated by being left with four fingers than with a stiff and contracted fifth finger after too zealous conservatism

Deutsche Zeitschrift für Chirurgie, Leipsic

October CXIX, Nos 3 4 pp 201 368

80 *Treatment of Glass Blowers Tumor (Ueber operative Eingriffe bei der Pneumatocele der Parotis und des Ductus Stenonianus) A Narath
81 *Surgery of the Heart. (Zur Chirurgie des Herzens) A Wagner
82 Experimental Goiter (Zur experimentellen Erzeugung der Struma) J Sasaki
83 Changes in Pulse and Blood Pressure with Pneumothorax. (Zur Kenntnis der Puls und Blutdruckveränderungen beim Pneumothorax) H E Walther
84 Dislocations in the Foot (Luxationen im Bereich des Mittelfusses) K Brockmann
85 *Anthrax (Der äussere Milzbrand des Menschen) O Heinemann
86 Primary Cystic Enlargement of Common Bile Duct (Zur Kasuistik der primären cystischen Erweiterung des Ductus choledochus) J Mayesima
87 Artificial Common Bile Duct (Experimentelle Versuche über künstliche Choledochusbildung durch einfaches Drainrohr) L Arnsperger and N Kimura

80 **Glass Blower's Tumor**—Narath comments on the errors in diagnosis of the tumor in the parotid gland which is an occupational affection in glass blowers In Liniger's case two physicians had ascribed the trouble to rupture of the buccal mucosa, but in this as in a personal case described and in all the others but one on record, there was no rupture, the air had merely forced its way through the outlet into the gland The chronically stretched duct and gland never return to normal conditions and the workman may thus be partially if not totally incapacitated for glass blowing unless some appliance can be worn which will compress from without the duct of Steno and thus prevent entrance of air during the blowing, or the condition can be corrected by an operation Narath exposed the duct and dug it out of its natural opening into the mouth, carrying it farther along to another point where he implanted the mouth of the duct in the mucosa This made the course of the duct slanting instead of direct, and a sort of valve action prevented entrance of air The new mouth of the duct finally grew up with cicatricial tissue, preventing the outflow of saliva A second operation was therefore necessary and Narath excised most of the parotid gland from without and thus put an end to the pneumatocele while sparing the muscles and nerves He was impressed with the efficiency of his adjuvant injection directly into the gland of a caustic solution It speedily destroyed the gland tissue and he thinks that direct injections of this kind through the natural outlet might be sufficient to cause the shriveling up of the gland without an operation There would, however, be danger of importing infection from the mouth with this treatment, and the preferable technic, he suggests, would be to bring the mouth of the duct out through the cheek and then, when the wounds had healed, to proceed to the obliteration of the parotid gland with injections of the caustic zinc chlorid He is waiting impatiently for an opportunity to try this method in the clinic after experimental research In conclusion he suggests that possibly mere ligation of the duct might prove effectual

81 **Surgery of the Heart.**—Wagner states that there are now 260 cases of operations on the heart on record with recovery of about 50 per cent of the patients The signs of injury of the heart from a stab or gunshot wound are the external wound, the abnormal murmurs, the spreading area of dulness, Rose's "heart tamponade" (strangulation of the heart from accumulation of blood in the pericardium), anemia and subjective phenomena such as precordial anguish, pain in the heart region, sense of oppression and dyspnea Roentgenoscopy is seldom practicable in a case of serious injury of the heart As the prospects are good for operative treatment up to the fourth hour, the importance of an early diagnosis is evident. But the most serious cases do not always present the severest symptoms In a personal case described all the signs pointed to a stab wound of the heart and it was exposed by an operation but the heart proved to be intact, although blood had accumulated in and around the pericardium The man would undoubt

edly have recovered without the operation, and the case would then have gone on record as "recovery from a stab wound of the heart under conservative measures alone," when in reality there had been no wound in the heart

85 **Anthrax.**—Heinemann has compiled 2,000 cases of malignant pustule and compares them with his own experience, his impression being that operative measures offer invariably the best prospects for a cure The operation must consist in the most thorough excision of the entire diseased area The assertions in regard to the harmfulness of this are based on false premises, only an incomplete operation can do harm, the complete can only benefit in the treatment of local anthrax The mortality in Koch's 1,473 cases was 38 8 per cent, but the statistics brought down to date give a mortality of 5 8 per cent in 2,255 cases The entire material is tabulated under various headings, with a full bibliography

Medizinische Klinik, Berlin

October 20 VIII No 42 pp 1693 1730

88 Examination of Nervous System After Trauma. (Welche Vorsichtsmassregeln sind bei der Untersuchung des Nervensystems Unfallverletzter zur beobachten?) P Schuster
89 Examination of the Hearing (Ueber Hörprüfung und ihre Verwertung in der amts und zivilärztlichen Praxis.) K. Biehl
90 Roentgenoscopy of the Spine (Der röntgenologische Nachweis von Verletzungen der Wirbelsäule) R Graessner
91 *Operative Treatment of Congenital Stenosis of the Pylorus C Rammstedt
92 Palpation of Gastro Intestinal Tract (Die topographische Gleit und Tiefenpalpation und ihre klinische Bedeutung) Hausmann
93 Experimental Syphilis in Rabbits (Kaninchenimpfung mit Syphilitikerblut und Blutserum) Aumann

91 **Operative Treatment of Congenital Stenosis of the Pylorus.**—Rammstedt reports the successful application in two cases of Weber's technic for a partial plastic operation on the pylorus without opening the mucosa Both patients were young male infants and the results were highly satisfactory The serosa and the thick muscular ring are incised without disturbing the mucosa, the muscular ring gapes at once afterward, sufficient to correct the tendency to stenosis The muscular ring was found closely contracted, bloodless, and, once divided, it separated, widening the lumen sufficient for the desired purpose To make sure of this, however, Rammstedt sutured the incision in the first case, drawing the lips transverse, and suturing a wisp of omentum over the whole to protect the line of suture beneath The child vomited occasionally afterward and was a long time in convalescing In future Rammstedt intends to refrain from the transverse suture, being convinced that the slitting of the muscular ring answers the purpose fully This corrects the spasmodic contracture of the pylorus, the hypertrophy will not cause disturbance if the spasm is corrected This is rendered certain by the finding of a hypertrophied pylorus in children who have recovered from early stenosis of the pylorus and have died of intercurrent disease If the slit pylorus is left a little incontinent, this can be regarded as an advantage rather than the reverse He treated the other male infant in this way more recently merely slitting the muscular ring of the pylorus below the mucosa not attempting any suture afterward and the results were perfect The infant was completely relieved of all disturbances and never vomited after the operation but rapidly recuperated under appropriate dieting As the duodenum is atrophied in these cases from disuse and is not accustomed to receiving much chyme at a time it must be gradually trained to this after the operation For these reasons and the injury from the inanition, it is best not to defer the operation too long

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

October XXXVI No 4 pp 393 510

94 Internal Secretion of the Corpus Luteum Klutsi
95 Papillomas of the Vagina F Kiesselbach
96 Mutation of Uterine Cancer (Carcinosarcoma uteri mit Metaplasie des Zylinderepithelkarzinom in Plattenepithelkarzinom) A Stein
97 Ovarian Cancer Inducing Lactation (Ueber ein primäres und ein metastatisches Ovarialkarzinom mit Milchbildung in den Brustdrüsen) H Saenger
98 Operative Treatment of Uterine Hemorrhage E. Parker Davis (Philadelphia)
99 *Bacteriologic Control of Asepsis in Vaginal Celiotomies D von Ott.

99 **Asepsis in Vaginal Operations**—Von Ott finds that in two-thirds of the gynecological cases in his clinic operative treatment can be applied by way of the vagina By a series of experiments he has found that the vagina and cervix and even the uterine cavity can be completely sterilized with either mercuric chlorid or tincture of iodin. He urges a more extensive use of the vaginal in preference to the abdominal route on account of the safety offered by this possibility of thorough sterilization

Monatsschrift für Kinderheilkunde, Leipsic

XI No 5 pp 175 232

100 *Alkalized Kefir in Infant Feeding (Eine vereinfachte Methode der Behandlung akuter Ernährungsstörungen beim Säugling) J Peiser
101 Delay in Vaccine Pustulization in Measles (Verzögertes Auftreten von Impfpusteln bei Masern) K Neumark
102 Two Cases of Latent Ductus Botalli (Stauungslunge bei Offenbleiben des Ductus Botalli) A Hayashi
103 Central Register of Women Willing to Nurse Another Infant Along with Their Own (Eine neue Organisation für die Behandlung darmkranker Säuglinge) Vogt

100 **Alkalinized Kefir, a Simple Method of Treating Acute Digestive Disturbances in Infants**—Peiser recommends the use of alkalinized kefir in treatment of acute intestinal troubles in infants To half a liter of kefir he adds half a liter water and 5 c c of a 20 per cent solution of sodium carbonate The sugar content of the mixture is about 1.5 per cent, albumin 1 0 per cent, and fat 1 7 per cent It checks fermentation and brings about a normal condition of the stools Its use should not be continued long after the stools return to normal as it is not sufficient for the child s proper nourishment It is easy to prepare, and it is cheap and therefore adapted for use in clinics About twenty case histories are given with the weight curves, to show the advantages of this food under certain conditions

Münchener medizinische Wochenschrift

October 15 LIX No 42 pp 2265 2320

104 *Diffuse Gonorrheal Peritonitis H Albrecht
105 Action of Antistreptococcus Serums F Heimann
106 Technic for Research on the Coagulation of the Blood (Die Blutentnahme bei Gerinnungsuntersuchungen mittels der Methode von W Schultz) I Holmgren
107 *Technic for Intravenous Injection Calli
108 Thyroid Treatment of Sterility (Schilddrüsenpräparate gegen Sterilität?) L Weil
109 Necropsy Findings in Case of Eventration of the Diaphragm (Zwerchfellinsuffizienz) H v Eggeling
110 Origin Prevention and Treatment of Nerve Relapses in Syphilis (Erfahrungen mit Salvarsan II) C L Dreyfus Commenced in No 41
111 Intoxication from Benzol Fumes P Beisele

104 **Diffuse Gonorrheal Peritonitis**—Albrecht gives the particulars of four cases of diffuse gonorrheal peritonitis, in two operative treatment was applied In every case the peritonitis developed with a stormy onset with rapid subsidence of the symptoms after the operation The mild character of gonorrheal peritonitis is confirmed anew by these experiences

107 **Intravenous Injections**—Calli describes the technic which is in routine use at Baccelli s clinic at Rome as the Italians apply this method frequently in treating tetanus sepsis malaria etc The sphygmograph cuff is very convenient for the purpose the radial pulse must not be abolished only the systolic pressure This permits the arterial blood to flow into the arm while the reflux in the vein is arrested The syringe is filled to four fifths with the fluid and the needle is inserted until it runs parallel to the course of the blood in the vein Withdrawing the piston permits a little blood to enter the syringe if it is really in the vein The contents of the syringe then are slowly injected and the piston is withdrawn a trifle again just as the pressure in the cuff is released In his extensive experience with the method he has never witnessed the slightest untoward by effects or pain from the injection

St. Petersburger medizinische Zeitschrift

October 14 XXXVII No 19 pp [illegible] 21

112 Surgical Disease of the Pancreas I Bode
113 Paratyphoid (Zur Frage der Paratyphus Erkrankungen) F Unterberger

Virchows Archiv, Berlin

October CCX No 1 pp 1 160

114 Adaptation of Tissues (Anpassung der [illegible]) R Thoma
115 Scar Formation ([illegible]) E. Creggio

116 Internal Pachymeningitis (Umschriebene bindegewebige Verdickungen an der inneren Fläche der Dura mater bei Pachymeningitis haemorrhagica interna) G R Lafora
117 Protuberance on Anterior Margin of Optic Chiasm (Fortsatzbildung am vorderen Rande des Chiasma nervorum opticorum) S Ogata
118 Muscular Anomalies in Domestic Animals (Dystrophie vereinzelter Muskeln beim Schweine und Pseudohypertrophia lipomatosa des Rindes.) L E MacKenzie
119 *Iron in Muscles (Auftreten mikrochemisch nachweisbaren Eisens und eisenhaltigen Pigments in quergestreiften Muskelfasern) M Ishida
120 Obliterating Bronchiolitis M D Karwicka
121 Chronic Nodose Peribronchiolitis in Cattle R Hintze
122 Morphology of Compensatory Hypertrophy and Hyperplasia of the Liver K Rochs and C de Leeuw

119 **Iron in Muscle**—Ishida's material was that of sixty one autopsies in addition to animal experimentation In the cases where there was muscular atrophy, he was able to demonstrate michrochemically the presence of iron in the striated muscle fibers This iron did not come from blood pigment but from the muscle itself, probably from the so called muscle hemoglobin In animals the same condition could be produced artificially by nerve section The iron was more abundant in guinea pigs than in mice. The practical value of this discovery is *that we can no longer say that an iron containing pigment* is necessarily derived from the blood

Wiener klinische Wochenschrift, Vienna

October 17, XXV No 42 pp 1557 1592

123 Lipoids in Blood During Pregnancy and Their Elimination in Milk (Lipoide der Gravidität und deren Ausscheidung nach vollendeter Schwangerschaft) E Hermann and J Neumann
124 Biologic Differential Diagnosis of Leprosy and Tuberkulosis R O Stein
125 Actinomycosis or Cancer of Submaxillary Salivary Gland (Zur Kasuistik der Erkrankungen der Unterkieferspeicheldrüse) O M Chiari
126 Case of Oppenheim s Progressive Twisting Spasms (Fall von Torsionskrampf) S Bernstein
127 Fatal Sepsis from Bird Shot Wound. (Zur Kasuistik der Schrotschussverletzungen) J Kumaris

Zeitschrift für klinische Medizin, Berlin

LXXVI, Nos 3 4 pp 167 373 Last indexed Oct 12, p 1417

128 *Diagnostic Importance of Pepsin in Urine (Harnpepsinbestimmung) H Tachau
129 *Ultimate History of Syphilitic Families (Schicksal Syphiliskranker und ihrer Familien) M Kaufmann Wolf
130 *Hemophilia. E Gressot
131 *Action of Large Doses of Alkalies in Diabetes (Ueber einige Wirkungen grosser Dosen Natr bicarb bei Diabetes mellitus) O Hanssen
32 Case of Paralysis Agitans with Enlargement of Parathyroid *Glands* G Gjestland.
133 *Intermittent Symptoms of Exophthalmic Goiter (Ueber intermittierende Basedowsymptome — bei Tabes dorsalis und Bronchialasthma) H Curschmann
134 *The Action of the Parathyroids in Nephritis (Ueber die entgiftende Tätigkeit der Parathyreoidea bei der Nephritis) M Georgopulos
135 Serodiagnosis of Echinococcus Disease (Diagnostische Verwertung der Echinokokkenkomplementbindung) T Barsony and E Egan
136 *The Criteria of Healed Pulmonary Tuberculosis (Die Kriterien der abgelaufenen Tuberkulose der Lungen und ihrer regionären Lymphdrüsen) G Goerdeler

128 **Pepsin in the Urine**—Tachau reports research which shows that the digestive ferments in the urine cannot be relied on as an index of stomach disease

129 **Syphilitic Families.**—Wolf here reports a second series of nine women with syphilis in the Heidelberg clinic for mental disease, mostly with progressive paralysis They were all married and some of their husbands remarried, so that the series includes twenty persons, only two were free from probable or certain syphilis The series is a continuation of similar research on a group of forty five persons (reviewed in The Journal, July 20, 1912, p 236) Of the sixty six pregnancies only thirty three viable children were born, and fourteen died in childhood, three committed suicide at 12, 20 and 28, two were epileptics, and one died after an abdominal operation, thirteen are still living but only two are normal The others are all feeble minded, epileptic, hysteric or with other nervous affections This research was not undertaken to show the frequency of syphilitic nervous disease, but it demonstrates the great share which syphilis has in the development of nervous affections The data presented show further that the assumption of a nervous predisposition is untenable, for the same parents in later years, after recovery from the syphilis, were able to generate healthy children The first series showed that "occult syphilis" generally runs a comparatively mild course to the end On the other hand, the second series show that the nervous form may prove an exceptionally serious taint for the family

130 **Hemophilia**—Gressot reports extremely minute clinical research for months in a case of hemophilia with necropsy two hours after death The findings show that a general lack of thrombokinase cannot be the cause of hemophilia, but it is certainly lacking in the blood It can be supplied from without in local application to the bleeding points in the form of fresh blood, serum or tissue juice By this means the flowing blood can be rapidly coagulated and, provided that the thrombokinase can get deep enough into the wound, *the hemorrhage may be* arrested by it This local application can be applied only to hemorrhage from the skin or mucosa of the mouth No other means proved effectual in controlling the hemorrhages in the case described, although all the measures in vogue were given most thorough trial There was no history of hemophilia in preceding generations, but the patient was the last of five brothers who had succumbed to bleeding from the gums or head after comparatively slight injury The patient has five sisters, three of whom are married and are normal and their daughters are also normal, but each has lost one or two sons from hemophilia

131 **By-Effects of Sodium Bicarbonate in Large Doses in Diabetes**—*Hanssen presents evidence to show that* while the bicarbonate may arrest coma in diabetes mellitus, yet this effect is only temporary The coma is merely postponed, and it is sure to return sooner or later The alkali has also a pronounced effect on the weight, probably from the following retention of water He tabulates fifteen cases in which the weight increased from 0 1 to 12 4 kilos (27 28 pounds) in from one to eleven days The details of eight coma cases are also tabulated with the necropsy findings Extreme hyperemia and edema in the meninges of the brain were found in every case, accompanied by hemorrhages in five cases In three of the six cases in which the sodium bicarbonate had been given intravenously, clonic or tonic spasms followed Albuminuria was a constant finding in all the severer cases of diabetes, but it regularly subsided under the alkali

133 **Intermittent Exophthalmic Goiter**—Curschmann calls attention to some cases in his practice in which the severe and complete picture of exophthalmic goiter developed at intervals, accompanied by other paroxysmal phenomena indicating disturbances in both the cerebrospinal and sympathetic nerve systems He has found only one reference in the literature (H Herz, 1902) to Basedow symptoms occurring intermittently in connection with vasomotor ataxia His first patient had tabes, and during his severe gastric crises all the symptoms of exophthalmic goiter developed in a pronounced form, the exophthalmos, tachycardia, sweating and tremor, and the thyroid swelled *At first all these symptoms subsided with the gastric* crisis without leaving a trace, but in time there was permanent persistence of slight exophthalmos and thyroid enlargement all the time, becoming exaggerated during the crises In his two other cases the intermittent Basedow accompanied attacks of asthma The exophthalmos, tachycardia, sweating and tremor were associated with various vasomotor symptoms, redness of the face and conjunctiva, cyanosis of the fingers, etc, and psychic disturbances, irritability, agitation, depression, etc., but the thyroid did not become enlarged One of the men had symmetrical lipomas in his neck, and these swelled notably during the attacks but subsided again afterward, confirming the assumption of a connection between lipomas and *thyroid functioning The same injurious influence* which induced the asthma and the thyroid intoxication, manifested in the intermittent Basedow, acted on the vasomotors of the lipomas The essential primal cause seems to be thus some irritation of the nerves regulating the secretion of the thyroid Curschmann's three cases of intermittent exophthalmic goiter throw light on the mechanism of the affection, and are further interesting from the therapeutic action displayed by epinephrin in regard to the tabetic crises He found that three to ten drops of the 1 1,000 solution, by the mouth, *arrested the crises* much sooner and more effectually than morphin and sodium

nitrate The epinephrin proved effectual also in arresting the asthma plus Basedow attacks in the other cases

134 The Parathyroids in Nephritis—In order to induce hyperfunctioning of the parathyroids, Georgopulos removed the thyroid in rabbits and then induced nephritis by injection of uranium nitrate. The results observed suggest that the parathyroids counteract the systemic intoxication in nephritis, and thus that an extract of these glands might prove useful in treatment of nephritis in man

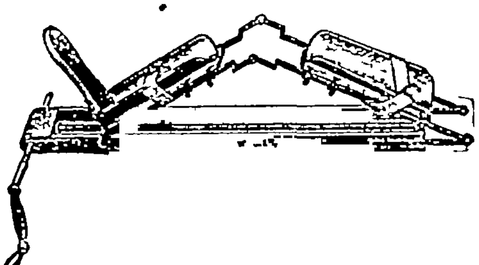
136 Signs of Healed Tuberculosis—Goerdeler analyzes the necropsy findings in the lungs of persons known or suspected to have had tuberculous processes, and he devotes nearly one hundred pages and three colored plates to a discussion of the interpretation of the anatomic findings In the same lung there may be induration of both tuberculous and non tuberculous character and it is often extremely difficult to differentiate them This difficulty renders it impossible to decide with any certainty as to the actual prevalence of pulmonary tuberculosis among adults Many linear adhesions in the pleura and patches of induration in the apices have nothing to do with tuberculosis, and diffuse calcification and ossification are no criteria of tuberculosis The statistics showing tuberculosis in 100 per cent (Nägeli), 91 (Burkhardt), 80 (Harbitz), or 60 per cent (Beitzke), of the cadavers examined should be corrected to percentages approximating Goerdeler's own, namely, 59 3 per cent of 284 cadavers were certainly tuberculous, while 39 per cent. were probably or possibly tuberculous The behavior of the elastic fibers and deposits of carbon are instructive differential points

Zentralblatt für Chirurgie, Leipsic

October 26 XXXIX No 43 pp 1473 1504

137 *Fracture of Patella (Zur Nachbehandlung von Patellarfrakturen mit totaler Zerreissung des Streckapparates). Gelinsky
138 Tibia Flap for Gap in Skull (Ersatz von Schädeldefekten aus der Tibia) Kleinschmidt.

137 Fracture of the Patella—Celinsky refers in particular to fracture accompanied by total laceration of the extensor apparatus The torn muscle retracts and shrivels and the longer this lasts the greater the force required to pull it out to unite the stumps again The operation should follow the injury as soon as possible, the next day at latest. Treatment should aim to suture the bone and muscles, relieve the traction on the sutures, and exercise the knee as soon as possible These requirements he has met with an adjustable splint holding the knee slightly flexed, the flexion can be increased at will by forcing the heel nearer the hip by turning a crank screw The screw thread is so fine that the heel can be moved part of a millimeter at a time This permits gentle stretching of the muscle, stopping at the least sensation of overtraction The muscle soon accustoms itself to the new position the tension subsides, and after fifteen minutes the screw can be turned again and the muscle thus stretched a trifle more At the close of the exercise the screw is wound the other way, bringing the heel back to its former position This can be repeated several times and thus gradually the muscles can be flexed and stretched keeping them in physiologic condition He gives the details of three cases in which he applied this method with complete recovery In one case carelessness resulted in the tearing through of the suture of the bone at the close of the first week An apparatus was then applied consisting of two claws fastened on each end of a rod with a screw thread The claws were inserted in the outer edges of the patella and screwed together on the rod until they held the parts of the patella in close coaptation In little more than a month the injured limb was ready to use at polo The three cases illustrate the slight dependence that can be placed on the suture of the bone The main thing is to restore normal conditions in the muscular apparatus When this is done if the parts of the patella separate later no harm results The claw apparatus described can take the place most effectually of suture of the bone, and in future Celinsky would not attempt the latter Another advantage of the claw apparatus is that it does away with muscular traction on the suture The claws can be left in place for three or four weeks The tips are anchored in the tendons and do not enter the joint proper An illustration is given also of this claw device


Knee rest splint permitting exercise

Zentralblatt für Gynäkologie, Leipsic

October 26 XXXVI, No 43 pp 1417 1456

139 *Influence of Death of the Fetus on Eclampsia (Bedeutungslosigkeit des Satzes von v Winckel für die Lehre über die Eklampsie) F Lichtenstein
140 Attempts at Abortion in Absence of Pregnancy (Abtreibungsversuch bei fehlender Schwangerschaft zugleich ein Beitrag zum Kampf gegen die kriminelle Fruchtabtreibung) F Thomä

139 Influence of Death of Fetus on Eclampsia—Lichtenstein states that in Lamsbach's recent exhaustive search through the literature he found records of only ten cases of eclampsia in which the convulsions ceased after the death of the fetus, in sixty eight cases the convulsions developed first after the death of the fetus, and in sixty six there was intercurrent eclampsia These data disprove the assumption that the death of the fetus arrests the eclampsia Fully 28 per cent of the women died of the fifty who were delivered of a macerated fetus When the patient begins to improve after the death of the fetus this is generally because the treatment has killed the fetus, this and the improvement observed are both the effects of a single cause—the therapeutic measures that have been applied (Compare with article in The Journal, March 16, 1912, p 781)

Gazzetta degli Ospedali e delle Cliniche, Milan

October 15 XXXIII No 124, pp 1297 1304

141 Agraphia Dejerine

October 17 No 125 pp 1305 1312

142 Radiotherapy as Adjuvant in Treatment of Surgical Tuberculosis (La fototerapia come cura complementare invernale delle cure marine in alcune forme scrofulo tubercolari della cute e del sistema articolare e osseo) L Cortona

October 20 No 126 pp 1313 1328

143 Operative Treatment of Primary Enlargement of the Spleen Advantages of Ligation of Splenic Artery T Silvestri

Policlinico, Rome

144 *Woody Phlegmon (Caso di flemmone ligneo) E Cunsoni
145 *Reduction of Malaria in Italy A Celli

October Medical Section No 10 pp 431 478

146 Relations Between Anaphylaxis and Fever C Moreschi and A Golgi
147 Glycogen in Liver and Blood in Cholera M Segale
148 Attempts at Serodiagnosis and Serotherapy in Kala Azar in Children (Tentativi immunodiagnostici ed immunoterapeutici nella Leishmaniosi infantile) A Longo
149 Epidemic of Small Pox (Epidemia di vaiolo a Londi) D A Mazzolani
150 Cholera in Southern Italy During 1911 (Epidemia colerica nelle Puglie—Anno 1911) A Casharrini

145 Reduction of Malaria in Italy—Celli presents the full data and statistics in regard to the practically gratuitous distribution of quinin by the government and the efforts at eradication of malaria by other means and the fine results thus accomplished to date as he reported them at the recent International Congress of Hygiene at Washington

Brazil Medico, Rio de Janeiro

September 22 XXVI No [illegible]

151 Diagnosis of Duodenal Ulcer [illegible]
152 Neurasthenia (O tratamento [illegible] da neurasthenia) C Armbrust

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15 *Asthma wit
Specific T
S. Teixei

153 **Pulmonary Syphilis**—Teixeira states that syphilis of the lung usually simulates acute or chronic bronchopneumonia or pulmonary tuberculosis or sclerosis of the lung, or syphilis and tuberculosis may be associated In a recent case he found a fifth form in which the symptoms seemed to be those of ordinary asthma His patient applied for relief from the asthma which had come on two months before The muscles of inspiration were contracted and tender, the sputum gray and thick He assumed an idiopathic asthma and instituted the ordinary arsenic and belladonna treatment, but the patient returned five days later showing no benefit He then displayed some varicose ulcers on the right leg which had been given local treatment for a year by different physicians without benefit The sight of these two ulcers suggested the diagnosis of syphilis and under mercurial treatment the ulcers healed up in a month and with them the asthma disappeared, and there was nothing left of the former trouble except a slight bronchial catarrh In another case of pulmonary syphilis a little girl of 7 presented symptoms of pulmonary tuberculosis The prognosis was regarded as grave until the discovery of a syphilitic eye affection in the mother Under specific treatment both mother and child were restored apparently to normal health At present, five years later, the only trace of the child's pulmonary syphilis is a patch of sclerosis in the middle portion of the right lung, she has taken a course of specific and arsenic treatment every spring and fall during the interval since

Norsk Magazin for Laegevidenskaben, Christiania

October, LXXIII No 10 pp 1406 1556

154 Roentgenoscopy of the Stomach (Om den normale og pathologiske ventrikel i Röntgenbilleder) S A Heyerdahl
155 *Fever After Delivery Is Not Always Puerperal Fever (Barselfebre og feber i barselsengen) K Brandt
156 *Intoxication Syndromes (Hypotetiske betragtninger over ætiologien av kostsygdommene svangerskaps intoxikationerne og endel andre intoxikationssygdomme) G Benestad
157 *Cholelithiasis with Complications (Komplicerte galdevelstilfælder) O Borchgrevink

155 **Puerperal Fever and Fever in the Puerperium**—Brandt states that the science of medicine has been passing in the last ten years through a "mask and glove period" from which it is now emerging Masks and gloves have not proved effectual in warding off infection and science is returning to the old conception of the *vis medicatrix naturae*, or, as we call it now, the resisting powers of the organism He expatiates on the dangers of allowing the public to cherish its present belief that when there is fever in a maternity case the obstetrician or attendants are at fault Even certain physicians now cherish this belief, and it is not only erroneous but it may lead to disastrous consequences He presents an array of evidence to prove that fever in the puerperium is not necessarily puerperal fever It may be the manifestation of a perforating gastric or duodenal ulcer, appendicitis rupture of an old pus focus in the uterine adnexa, miliary tuberculosis, gonorrhea, infected extra genital thrombi or osteomyelitic focus The open wounds in the genital organs may become infected from some infectious process in the tonsils, from a mastitis or otitis media, while actual puerperal fever can certainly develop from self infection The diagnosis of actual puerperal fever cannot be made with certainty without direct visual inspection of the internal genitals at necropsy or an operation He gives the details of nine cases in which to the lay mind everything seemed to indicate puerperal infection, and yet this was absolutely not the case in most of them He urges the necessity for great caution in certifying to a death from puerperal fever when there has been no internal examination by the physician or attendant In the first case, during the puerperium there was subfebrile temperature and occasional coughing and an effusion developed in the right iliac fossa The respiration suffered and the patient died the twenty ninth day three days after the death of the child The temperature curve was not that of puerperal infection, and necropsy revealed an old left pulmonary tuberculous process, a right tuberculous salpingitis and miliary tuberculosis, and the child's lungs were full of tubercles Without the necropsy the death would have been credited to puerperal fever without fail In the second case the puerperium was normal but two weeks after the patient's return home, headache and high fever developed as the first signs of sepsis, fatal fourteen days later Necropsy here showed the uterus in normal involution, with nothing pathologic in the adnexa or surrounding tissue. Absolutely no cause for the infection could be discovered except a small ulceration on one toe If the temperature and pulse curves and the necropsy findings had not shown such a normal course, this would have been regarded as a tardy puerperal fever In a third case the woman had had placenta prævia two years before and she had "caught cold" before the present childbirth The temperature and pulse were normal after a slight rise the third day, ascribed to the mild coryza with herpes Otherwise the puerperium was normal and the woman was out of doors after her return home As she did not feel quite well, she called a physician who found nothing pathologic and merely advised repose As she continued to feel badly she called another physician who found then fever and an effusion near the uterus, and the woman died a month after dismissal from the hospital The physicians ascribed the death on the certificate to "puerperal fever of five weeks' duration" The husband instituted a suit for damages against the maternity, claiming that his wife had been dismissed while she had puerperal fever The maternity curves showing the normal temperature disproved part of this allegation There was no necropsy In this as well as in all the other cases reported no internal examination had been made by physician or attendant The most probable explanation of the case is that some pathologic process left from the old placenta prævia had flared up during the involution of the uterus after the patient was up and about, and parametritis had followed This case emphasizes anew the necessity for examining the maternity records and the post mortem findings before certifying to a death from puerperal fever In some of the other cases an intercurrent appendicitis or flaring up of an old process was responsible for the clinical picture of the puerperal fever In others the patients had inflammation of varicose veins in the legs before delivery, and the inflammation spread upward, entailing a three months' sickness Brandt considered the advisability of ligating the varicose vein but did not do this, in future he would ligate at once in such a case, striving to prevent the upward spread of the process in the femoral vein There is no question that many cases of embolism in the puerperium are due to old thrombophlebitis The genital organs undergoing involution offer a point of lesser resistance, so that infection from any point in the body is liable to localize there and get the physician or midwife into trouble unless the profession combats the present prevailing idea that fever in the puerperium is due inevitably to some sin of commission or omission on the part of the obstetrician or attendant

156 **Pregnancy and Other Intoxications**—Benestad groups beriberi, scorbutus and eclampsia together as affections due to products absorbed from the intestines or the glands with an internal secretion or from the fetus He theorizes to explain them all as the result of absorption of unfinished products Under normal conditions the products are elaborated a little more fully and are not toxic. In pathologic conditions, these products are unfinished and represent intermediary products which have a decidedly toxic action when absorbed. The manifestations are mostly nervous phenomena, cramps, convulsions and kidney or cardiovascular symptoms and hemorrhages The outcome as a rule is either death or complete restitution In all this group, from the standpoint of both therapeutics and prophylaxis, the diet is of primal importance

157 **Complicated Gall-Stone Cases.**—Borchgrevink reports a case of perforation of the gall bladder with circumscribed peritonitis, another of ileus following perforation of the gall bladder and a third case in which the common bile duct became occluded after cholecystectomy He discusses the literature on this subject of operative loss of continuity of the common bile duct and means to remedy it

Ugeskrift for Læger, Copenhagen

October 17 LXXIV No 42 pp 1499 1560

158 Connection Between Internal Ear and Central Nervous System (Barany s Lære om Forholdet mellem Vestibularapparat og Centralnervesystem.) P T Hald. Commenced in No 41.

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ARTERIOSCLEROSIS *

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Arteriosclerosis is a penalty of our present civilization and is increasing in frequency so rapidly that any study or contribution leading to its better understanding is well worth while

For a profitable consideration of the subject, certain fundamental facts of the physics of the circulation and the maintenance of cell life must be recalled The proper nutrition of the different organs of the body is dependent not only on the functional activity of their own cells, but also on the vital activity of the cells making up the cardiovascular mechanism Not only must both cell elements remain structurally and functionally intact, but there must be a certain intravascular tension in the arteries, arterioles and capillaries

I believe no physiologist holds that tissue nutrition can be maintained in the absence of tension This neither negatives nor loses sight of the principle of osmosis, which, in this connection, might stand for chemical tension A concrete illustration of this may be found in the kidneys As long as they function normally, even excessive blood-pressure does not cause albumin to be forced through the epithelium lining the tubules in appreciable amount, it is only when the vital activity of the lining cells is interfered with through long-continued strain, toxins or irritants, that albumin and possibly blood appear in the urine Following and perhaps concomitant with this, connective-tissue changes take place, and the sclerotic condition develops

A point quite puzzling and one requiring much study is Why is sclerosis sometimes localized and sometimes general? As a working hypothesis it might be assumed (1) that there is a local defect either congenital or acquired, in the organ or organs involved, or (2) that the specific toxin has a selective influence which acts on the vasomotor or trophic centers, regulating the blood-supply and nutrition of the part involved the toxin or irritant acting on the vasomotor mechanism and secondarily on the cells lining the arterial and capillary systems and producing sclerotic changes in the vessels and throughout the areas supplied by them

Excessive muscular work, either general or local, may impair the integrity of the vascular mechanism Even in this case it is likely that toxins resulting from tissue destruction may be operating As to how these act beyond certain generalizations it is impossible at this time to determine with any degree of accuracy It has been conclusively shown that local sclerosis without marked sclerotic change in other parts, occurs in the vessels of the brain, and that to this condition is due the fact that so many more ruptures occur in this portion of the arteriocapillary tree than elsewhere but why? Is it because this portion of the organism is more actively employed during the entire cycle of life or because the vessels in this region are more vulnerable through constant use and grow old while the other parts of the body are yet young?

Certain it is that apoplexy is relatively frequent here while it is relatively infrequent in other organs irrespective of age The importance of this phase of the subject is apparent when one reviews the number of sudden deaths the frequent paralyses that make the further life of the sufferers a burden to themselves and the state — all the result of sclerosis not infrequently limited to the cerebral arteries If the preapoplectic symptoms could be interpreted with any degree of accuracy, how many of these tragedies of existence might be averted? Neither the trained tactile sense nor the sphygmomanometer is a sufficient danger-signal I have had the opportunity of being with a number of patients immediately before, during and after the rupture of cerebral vessels and beyond some increase in vascular tension and irritability of temper or depression of spirits there was nothing to give warning of the impending catastrophe

Again the vessels of the kidneys are especially liable to undergo sclerotic change producing commonly chronic interstitial nephritis In these cases also it is desirable to know why the local sclerosis of the renal vessels occurs at times without appreciable change elsewhere The liver vessels undergo sclerotic change and the same problems confront us from what we know of the functions of this important gland we should expect to find sclerosis more commonly present in it than the kidneys and yet I believe that this is not the case Sclerotic change may occur in any portion of the arterial tree and atheromatous patches are frequent in the larger trunks after middle life the coronary arteries being especially subject to sclerotic degeneration Coronary sclerosis alone has frequently been encountered

It may be maintained that all these organs are more or less constantly active and more liable to degenerative change It is not so clear however why the arteries of the extremities are prone to undergo sclerotic change for their activity is not so great or so constant as in the organs mentioned Yet sclerosis occurring in the arteries of the extremities and the head is common [illegible] it is in the former that we make [illegible] of the degree of the sclerosis [illegible] existing within the arter

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* Read in the Section on Practice of Medicine of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

ETIOLOGY

Admitting, then, that it is impossible at this time adequately to explain localized sclerosis, it is nevertheless profitable to inquire into its general causation, its method of manifestation and its course and management Age is a certain producer of sclerosis, but a fixed span of years cannot be given After middle life a certain degree of sclerosis is apt to be found in the majority of persons Though the expression be trite, nothing is truer than the axiom that "a man is as old as his arteries," some men of 40 years being in reality 60, 70 or 80 The life of an engine is dependent on the metal which goes into its construction and the care that is taken of it; the same is true of the more perfect physical mechanism, and Osler has aptly observed that a man often takes less care of his body than he does of his motor. It is undeniably true of the body as of the machine that it is better to wear out than to rust out, but in purposive design neither extreme is desirable

Aside from age, the unfailing producer of sclerosis, we have other causes operating, chief among these is the high pressure at which the human machine is run in our modern civilization The average man or woman lives in an atmosphere of work and worry, taking insufficient thought of either physical or mental needs One could follow up the myriad avenues of life indefinitely, but they all lead through ways more or less unwholesome and end in the one meeting-point, premature decay Man presents a pitiful spectacle racing at top speed to gain wealth or position, staggering under the delusion that old age will bring rest and enjoyment, and becoming enlightened, alas, too late, to find that his rest is disturbed by discomfort and that enjoyment is a memory only

In a practice of more than a score of years I have seen many instances of men who have slaved through life and gained their golden fleece, and who, if their bodies were not broken by ill health, found themselves so enslaved by the habit of work that rest was positive punishment Such men are like the old blind treadmill horse which, having earned its freedom, when turned out to pasture each morning as the sun rose, walked in a circle till the night

Next to the stress and strain of modern life, and undoubtedly augmented by it, come the acute infections and intoxications as causative agents These act as irritants to the cardiovascular apparatus, impairing the vitality of the cells forming their structure and inducing sclerotic change, which makes the vessels less elastic and interferes with the normal metabolism of the organism

Syphilis is a common producer of sclerosis, and I believe that, as our knowledge increases, it will be proved to be a much more frequent cause than is realized by our profession to-day

Next come poisons, under which may be included lead and other mineral poisons, alcohol, tobacco, tea, coffee, etc Billings has shown the causative rôle played by lead, and others believe that mercury when taken in large quantity and for a long time produces it Alcohol may be classed as an indirect causative agent, in that when used to excess it produces digestive disturbances, which in turn result in auto-intoxications, which are admittedly a prolific cause of the disease

It would be amiss if in this connection I did not cite Cabot's scholarly paper on alcohol as a producer of sclerosis in a long series of cases he found sclerosis much less frequent among a series of hard and chronic drinkers than among a similar series of professional men It should be borne in mind, however, that his work does not prove that alcohol does not indirectly produce sclerosis, it does prove that sclerosis is less frequent in alcoholics than in those who live constantly under high tension In this connection Osler calls attention to the fact that not infrequently persons who are abstemious in the use of alcohol are "exceedingly careless and indulgent in the matter of eating" Other authorities are equally suggestive on this score It is often the case that men who are innocent of one excess go to another Again, sclerosis is found in those whose occupations demand great and continued physical strain, and in young men who keep up high and long-continued tension in athletic sports

SYMPTOMS

The effect of arteriosclerosis, by whatever cause it may have been produced, is the disturbance of function, the parts involved become less active and atrophy more or less gradually, according to the speed of the circulation Sclerosis may involve only the smaller arteries, in which the symptoms will vary with the part or parts affected The first symptom may be sudden death from the rupture of a cerebral vessel or thrombosis of a coronary artery

In the kidneys the sclerotic change affects not only the vessels but the interstitial tissue and parenchyma of these organs as well, and is evidenced clinically by changes in the urine A common form of nephritis following sclerosis is the contracted kidney, in which the blood-pressure is usually high, the apex-beat of the heart is displaced downward and to the left, there is a "thudding first sound" and an accentuation of the second, and more or less nervous and digestive disturbance, with the appearance of albumin and casts in the urine

Sclerosis occurs in the splanchnic vessels, manifesting itself during life by irregular and otherwise unaccountable attacks of abdominal pain Advanced sclerosis of terminal larger vessels may result in necrosis or gangrene, and sclerosis of smaller ones, in hemorrhagic infarcts Finally, it must be borne in mind that sclerosis of the vessels of all the parts mentioned may occur without "any change in the palpable arteries" Since many of the symptoms of the early stages of the disease are indefinite, obscure and not pathognomonic, it is plain that its early diagnosis is at all times difficult and frequently impossible

It is this phase which makes the critical study of arteriosclerosis all the more imperative, for it is only in its beginnings, whatever be the etiology, that any hope of cure can be promised After sclerosis is well established a return to the normal should not be expected It is of the utmost importance, therefore, that the general practitioner be on the alert to discover the earliest recognizable symptoms These are left ventricular hypertrophy, digestive disturbances, more or less irritability of temper or other nervous phenomena, and the presence of albumin and usually casts in the urine, although cases may occur with any of these absent

The blood-pressure is estimated through the medium of the touch in palpable arteries and by the employment of an instrument of more or less precision, the sphygmomanometer This instrument should be more generally employed in all physical examinations, as its evidence is of no small value, it is, however, subject to considerable error and should not supplant the touch of the skilled examining finger If time permitted, it would be profitable to go into these defects in detail Hoover, in an excellent contribution to this subject, makes the following observations

> Whether there were really different endovascular pressures in the several arteries or different degrees of hypertonus in the arterial walls which gave the results, the deduction remains the same, namely, that the blood pressure apparatus applied to the accessible arteries does not give infallible information as to the aortic blood pressure, as a consequence it is not safe to rely on routine measurements from the area as a guide to the employment of the vasodilators in treating patients with a high arterial pressure I do not wish to discourage the blood pressure apparatus It is a very valuable instrument, but its chief value consists in teaching us how to palpate the arterial pulse No instrument can take the place of the finger, nor can any instrument teach us so much about the pulse as can be learned by palpation

Daland has shown that the mere application of the pneumatic cuff in certain neurotic subjects often increases the blood-pressure as much as 30 or 40 mm

PREVENTION AND TREATMENT

The widest field for good lies in the prevention rather than in the cure of arteriosclerosis All causes which we know operate to produce the condition should be curtailed or eliminated as far as possible There are two parties in this problem, the physician as the educator, and the individual who is willing as far as may be to profit by the advice The individual should as closely as he can approximate the normal life, and excesses of all kinds, mental as well as physical, should be avoided The pace that kills and the strenuous life should be shunned Food should be taken in sufficient quantity, and of a quality calculated to maintain the body in a state of physiologic equilibrium, beyond this it is unwise to go constantly or at frequent intervals Alcohol, coffee, tea and tobacco should be used moderately, if at all

The exciting cause must be treated in sufferers from toxic agents in the blood, such as lead-poisoning, diabetes mellitus, syphilis, tuberculosis, gout, rheumatism and the acute infections It goes without saying that the age and general condition of the patient should be considered What would be moderate in the young would be immoderate in old age, we should not put new wine into old bottles

The treatment of arteriosclerosis may conveniently be divided into hygienic, dietetic and medicinal

Everyone requires a certain amount of exercise, the kind and amount should be adjusted to meet the demands of the individual When active exercise for one reason or another cannot be taken, much good will come from massage properly applied It quickens the circulation and increases the elimination of waste products In dilating the vessels of the skin, it to that extent diminishes the work of the heart

Baths properly administered are of distinct value, including hot baths hot packs, vapor-baths, tepid baths and carbon dioxid or the so-called Nauheim baths Cold baths are rarely indicated All have for their object the increase of blood through the skin, and also excretion by the skin, thereby diminishing the work of the heart and of the kidneys

The physical and mental activities of the patient must be carefully directed In some cases curtailment alone is sufficient in others total abstinence from all work, physical and mental is imperative It is frequently surprising to see the good that immediately follows after the patient has made a complete surrender in this direction Many an old boiler will last for years when run under diminished pressure

Time will not admit of going into the matter of diet in detail suffice it to say that the individual capacity will have to be studied in each case It is a fact that the majority of persons eat too much and nearly all too rapidly In mild cases cutting down the diet may be sufficient eliminating such articles as are apt to overburden the alimentary tract and the kidneys In general, meat should be indulged in sparingly The sugars may be borne well by some but are apt to lead to gastro intestinal fermentation Milk, variously modified eggs, fresh vegetables and fruit are more or less staple articles, as is bread, and may be taken by most patients In advanced cases a rigidly restricted diet is at all times imperative In all cases the amount of alcohol tobacco tea and coffee allowed should be moderate and doubtless the best rule in many cases is "not at all Since we have seen, however, that a large degree of sclerosis is present in most persons after middle life it is not wise or expedient to be extreme in these matters until our knowledge becomes more exact

Individual instances often shatter one s theories I have seen men, in apparently robust health and advanced in age, who had throughout their adult lives been hard drinkers excessive users of tobacco, or immoderate tea and coffee habitues and yet sclerosis in them was in abeyance The total abolition of these creature comforts is often unwise and their regulation must be left to the wisdom of the physician

As to the use of mercury in syphilis, I should be willing to run the risk of producing arteriosclerosis by the use of mercury rather than to run the surer risk of having the sclerosis develop from the effects of syphilitic infection In all luetic cases the iodids are of value, and in many cases which are not luetic their rôle is distinctly good Their employment may be more or less empirical, but in a large number of cases I believe they tend to hold down tension and discourage sclerotic change

Nitroglycerin acts quickly and may be employed for a long time without harm, its chief drawback being its evanescence It rapidly causes dilatation of the peripheral vessels and if pushed sufficiently far will cause flushing of the face and headache It not only relieves the overburdened heart, but increases the activity of the kidneys It may be administered in appropriate cases in doses of from 1/50 to 1/100 grain every two or three hours for long periods without injurious effect Nitrite of amyl pearls may be broken and inhaled in urgent cases but are not a substitute for nitroglycerin The more lasting effects of the nitrites make them preferable, of these sodium nitrite in 1 grain to 3 grain doses repeated three times a day or every four hours, may be given

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ABSTRACT OF DISCUSSION

Dr Louis Faugeres Bishop New York I believe that the causes of arteriosclerosis can be divided into two classes one in which the affection is due to certain poisons like lead and possibly other metals to syphilis and other infectious diseases, and a larger class in which the arteriosclerosis is compensatory Ninety out of 100 cases of high blood pressure are due to auto intoxication or to the circulation in the blood of amino acids which are produced by the breaking up of proteids in the intestinal canal and a failure on the part of the liver to exclude these toxic substances from the circulation I think that the high blood pressure is caused by an attempt on the part of Nature to force out of the system through the kidneys the products of protein decomposition and that the heart is damaged [illegible] kidneys My observations are founded on t[illegible] urinary analyses among th[illegible] York City A study of t[illegible] better picture of the cau[illegible] can get in hospital ca[illegible] restricted diet are misleading. Observation of the urine, covering a series of years, shows first an excess of indican, later one finds as well a faint trace of albumin and casts. As the case goes on the patient develops neurasthenic symptoms and then arteriosclerosis. I have followed many of these cases in private practice and I have come to certain definite conclusions. Arteriosclerosis is a very common affection among physicians. I have on my records sixty-five physicians with arteriosclerosis and in nearly every instance there was indican in the urine, a high blood-pressure, albumin and casts, and other features pointing to amino-acid poisoning.

The important point regarding these cases of arteriosclerosis is, of course, the treatment. Are the amino-acids coming from meat decomposition always the cause of the trouble? I do not believe that this is the cause in every case. Among the other possible causes may be overindulgence in eggs or fish.

Another very important thing in the treatment of these cases, I believe, is the proper administration of castor oil; these patients on beginning treatment are given 1 ounce of the oil for three days, then the same amount once a week and then the same amount once a month; the results obtained are often surprising. A third important measure in the treatment of these cases is physical labor. I have seen patients with arteriosclerosis who have had slight strokes of paralysis, with a blood-pressure of 230, and who, under the regimen mentioned in regard to the proteid diet and with the employment of physical exercise, have gone on for years.

DR. G. W. McCASKEY, Fort Wayne, Ind.: There are three factors to be considered in every case of so-called arteriosclerosis: First, the sclerotic changes in the blood-vessels proper; second, the cardiac sclerosis, and third, the factor which is clinically most important, because most amenable to treatment, the arterial spasm. So far as the etiology of arteriosclerosis is concerned, I think that two distinct causes should be recognized, the first being toxic, and the second mechanical and due to physical overstrain from various causes. The toxic causes may be derived from the intestines or may be the result of metabolic disturbances of one source or another, perhaps various products of the amino-acids. Severe physical strain or the overexcitement of the cardiovascular apparatus resulting from emotional excitement or mental stress undoubtedly produces arteriosclerosis.

It is important that we should have clear-cut notions of the therapeutic indications in these cases. We ought, in other words, to distinguish clearly between the organic changes of the blood-vessels and heart which cannot be removed, and the arterial spasms which are very largely removable. Rest in bed with thorough elimination, carefully regulated diet, from which the purin bodies should be largely if not completely removed, and the use of vasodilators constitute the proper treatment.

As vasodilators I commonly use the spirits of glonoin, and begin in hospital cases with 1 drop every hour, increasing every day or every alternating day to 2 drops per hour and pushing the dose in this way up to the limit of tolerance, or until satisfactory results have been obtained.

DR. HENRY O. MARCY, Boston: Arteriosclerosis is largely the result of the undue pressure that is brought to bear on the human machine which we should all learn how to care for and protect. To me the wonder is that the modern business man in our large cities does not break down earlier. In the whirl of business care, his every activity is in high tension. He takes little time for meals, pampers his appetite with every delicacy, uses coffee and alcoholic stimulants freely, smokes excessively, exercises little, sleeps badly and wakes to repeat the round. Over such a man at home the physician has little control. Send him to Carlsbad and note the change. Diet simple, largely milk, the waters in sufficient quantity to act on the excretory organs, no alcohol, no tobacco, nothing except as ordered by the physician. The psychotherapeutic effect of his hours of hot mud baths and repose four or five thousand miles from his business cares renovate him and make him enthusiastic over his cure, but he returns only to plunge again into the same round of business dissipation which leads to physical ruin. Why call the results by such meaningless names as "arteriosclerosis"? The duty of the physician is to sound the danger signal before it is too late, to teach hygienic living, abstemious habits, the simple life. We of the profession know that under wise guidance the ills of life would be reduced one half, the production of the race doubled and longevity increased at least one third.

DR. JAMES M. ANDERS, Philadelphia: Dr. Coleman spoke particularly of the localized variety of arteriosclerosis and of the great difficulty in finding its precise cause. I think that the majority of authorities are agreed that it is due most commonly to syphilis, and this also accords with my own personal experience and observation. To my mind the treatment or management of arteriosclerosis often savors of a comedy of errors. If the modern conception of the histologic changes of the condition be correct, if, primarily, the media is the seat of either productive or degenerative lesions, and to compensate these changes, the intima becomes greatly thickened, then surely, two things must follow: First, the lumen of the vessel must be narrowed, and second, the tension in the vessels must be raised to a corresponding degree. One is tempted to ask, Why attempt to interfere with this compensatory mechanism of Nature? I believe that the trend of the profession has been and still is in the direction of interfering too much rather than too little with this wise conservative process. There is, however, a class of cases made up of instances of incipient arteriosclerosis, in which the blood-pressure is considerably elevated, associated with a marked vasoconstriction due largely to nervous causes. Here absolute bodily and mental rest, arterial relaxants and liberal feeding will often effect an apparent cure, provided that the causes, both near and remote, can be successfully combated. It should not be forgotten that the principal aim in all cases must be to ascertain and then to combat causes.

DR. DELANCEY ROCHESTER, Buffalo, N. Y.: If anything was brought out clearly in the previous discussion of this subject in this Section several years ago, it was that the chief etiologic factors of arteriosclerosis are syphilis and hard work. Under the circumstances, to place these people at hard work is decidedly contra-indicated. Any exercise should be undertaken only under careful observation. I agree with what has been said regarding the reduction of the proteids in the diet, especially if there is a decided impairment of renal function. Elimination of waste products is of value in the treatment of this disease. I agree with Dr. Anders that arteriosclerosis, when localized, is largely a condition due to syphilis. Since the use of the Wassermann reaction we have found more evidence of syphilis as an etiologic factor in arteriosclerosis and changes in the circulatory apparatus, especially of heart and aorta, than ever before.

DR. M. A. COHN, Brooklyn: I wish to cite a case just now under my care. A man, aged 27, presented himself April 2, 1912, with the following history: While walking in the street with a friend twelve days previously he suddenly collapsed and was picked up unconscious and limp and pronounced dead, being refused admittance into the offices of two successive nearby physicians on that ground. The third physician finally allowed the dying man to be stretched on the floor while a hypodermic was being administered and the ambulance telephoned for. After remaining in the hospital one week, the patient was discharged as cured and was permitted to walk home without any warnings or restriction whatever. The man, a plumber by trade, big and well nourished, looked sallow and anxious, with dark rings under his eyes and he breathed rather laboriously. A careful examination revealed the following condition: pulse high tensioned, mitral and aortic systole feeble and muffled, the characteristic blue line about his gums, traces of albumin, some hyaline casts and a slight excess of indican in the urine, and some moist râles at the base of the left lung. On applying my sphygmomanometer, I was not a little amazed to find that no less than a pressure of 280 mm. Hg was required to stop the radial pulse. As a luetic history was positively denied and no signs or symptoms pointed in that direction, the conclusion was reached that the case was one of chronic plumbism producing arteriosclerosis and interstitial nephritis, the feeble myocardium giving rise to the pulmonary edema and to the frothy, pink expectoration which occurred the night prior to the patient's sudden collapse and continued for two days thereafter He was informed of the extreme gravity of his condition, was put to bed on a strictly milk diet, and, after a thorough elimination by bowels, kidneys and skin, was given potassium iodid to remove the lead from the system, doses of nitroglycerin were gradually increased Seeing, however, no improvement, subjective or objective, even after doses of 1/20 grain of nitroglycerin three times a day, I discontinued its use and on the suggestion of Dr G R Butler, who saw the case with me, began the use of ½ grain doses of erythrol tetronitrate three times a day with the simultaneous administration of 5 drops of the tincture of strophanthus three and four times daily and also short steam baths, with patient in bed, once every one or two days for a week or so The patient is temporarily improving, is allowed some outdoor exercise and a little more liberal diet, with little fluid, however The blood pressure is still above 240 mm, some albumin and casts are still to be found in the urine, but there were no attacks of angina pectoris recently, no dyspnea or polyuria and the whole of the Stokes Adams' syndrome is absent

Dr. Marvin L Graves, Galveston, Tex Until we know more regarding the etiologic factors concerned in the production of arteriosclerosis we can do but little in combating it A great deal of consideration should be given to the character of the life of the individual in ascertaining its relation to high blood pressure or arteriosclerosis Dr Bishop believes that these arteriosclerotic patients with high blood pressure should be urged to take exercise, but I think a discriminating judgment is absolutely necessary in treating these patients For instance, arteriosclerosis occurring in a laboring man who has been at active physical exercises all his life should be treated differently from that in a man who has been leading a sedentary life Under many conditions I do not think it would be advisable to prescribe large amounts of physical exercise for these patients who are afflicted with arteriosclerosis To order a man who leads a sedentary life, and who eats too much of all kinds of foods, not only the proteid foods but all kinds, to take physical exercise indiscriminately would tend only to work harm Such men should be kept as much as possible in the open air with properly graduated exercise, the total amount of food they were in the habit of consuming should be cut down, especially the proteids In doing this, many of these individuals would be relieved I think that a sharp distinction should be drawn between toxic conditions which produce high blood pressures and changes in the arteries which cause arteriosclerosis with its increased blood pressure

Too much stress is laid on the reduction of the blood pressure I have seen, in patients of 45 and 60 years of age, an unduly high blood pressure—one of 150, one of 200 or even one of 225 mm. Hg—which has been reduced by the enforcement of a rigid diet and the use of nitroglycerin or sodium nitrite, as well as an active purgation, under such treatment one also sees patients who are made worse and not better I do not believe that we should always try to reduce the blood pressure to what we consider to be the normal It is impossible, in my opinion to reduce to the normal with safety to the patient a high blood pressure which has been maintained for a number of years, especially with arteriosclerosis

Dr Tom A Williams, Washington D C Arteriosclerosis is a condition which can be prevented but which when it has occurred cannot be cured Many of the early symptoms are cerebral The guide in the treatment of individuals afflicted with arteriosclerosis should not be what could be accomplished in lowering the blood pressure *per se* but the study of the state and condition of the individual which determined his optimum pressure Naturally with a very high optimum pressure time of life will be short Of the means of treatment at our disposal the most important relates to the diet I believe in a diet which is similar to the Chittenden standard, that is that 50 gm protein per day is ample and should not be exceeded in these cases It is wonderful how well these patients will do when the proteins are cut down and more especially the proteins that are taken at the evening meal before the lowered oxidation of sleep Beyond abundance of succulent fruits and vegetables I do not believe that purgatives should be resorted to as eliminants They interfere with osmosis and muscle tone of the bowels and hence favor the absorption of substances which make for increased blood pressure Both as revulsants and eliminants I favor the use of hot baths and massage, and no expensive apparatus is needed The efficacy of active exercise in these cases is exaggerated but not contra indicated in those cases of arteriosclerosis which might be described as being in the presclerotic stage It is a very important thing for the patients themselves to appreciate their condition What is impending unless forestalled should be impressed on them by the physician in order that they may readjust their lives and do what is best for their greatest efficiency in the long run, even though it might result in some immediate loss of comfort or money These principles of practices have been of great value in my hands and have made unnecessary recourse to expensive measures like d Arsonval currents, water cures and the like

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THE MENACE TO THE YOUNG CHILD OF THE COMMON INFECTIOUS COLD *

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Many of my colleagues are doubtless convinced of the truth contained in my title, and would accept the text without the discourse which follows, for it is scarcely possible that my individual experience has been exceptional or that it has not been duplicated by scores of others Nevertheless, it has seemed to me proper to put my views in concrete form in the hope that there may result a wider realization and discussion of this problem in all its bearings

The observations of recent years have taught me to respect the common infectious cold as a far from trivial affection and one capable of inflicting serious injuries on its victims Ever since the initial intensity of the influenza pandemic of 1889-90 waned we have experienced recurring waves of infectious catarrhal colds which have been spoken of generically as influenza or grip or simply as colds In the absence of laboratory confirmation of the exact bacterial cause the classification of such endemic or epidemic affections has not been possible, and the resulting uncertainty has found expression in the loose terminology adopted alike by the medical profession and by the laity

Mention should properly be made in this connection of the careful work in this country by Wollstein but since her researches demonstrated the presence of the Pfeiffer bacillus as a causative or complicating factor in only a certain proportion of the inflammations of the respiratory tract among the infants studied they threw but little light on the etiology of the case under discussion save by indicating that such cases may be due to several diverse forms of microorganisms Nevertheless since it is well-nigh impossible under the ordinary conditions of general practice to differentiate true influenza from its imitators and since clinical observation has demonstrated the unmistakable infectiousness of such colds we are forced to consider them as a whole for the very practical purpose of inquiring whether such damage, especially among young infants, is not wrought by them which could be prevented by rational prophylactic measures.

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

To these infections of the mucous membranes the infant seems to be especially susceptible. When one of these colds invades a household, several of its members usually contract it. While some adults may escape, the majority of physicians will bear me out that the baby or the child of runabout age is almost invariably affected. To such an extent is this true that nowadays when called to see a young child with catarrhal symptoms, I seldom inquire how the patient "caught cold," in the old sense of exposure to draughts or the elements, but ask at once whether other members of the family or household servants have recently had similar symptoms. I am seldom disappointed in my quest.

These infections spread rapidly and with great certainty through the wards of institutions caring for young children. During recent winters in one institution the morbidity from this source has far exceeded that from all other infectious diseases of childhood. As might be expected with children of the institution class, acute otitis media has been very common, pneumonia, less so though not infrequent, while acute suppurative adenitis, considered one of the complications of influenza, has been rare.

Serious as these recognized forms of sequelae are, there is yet another direction in which still more frequent and often irretrievable damage follows in the path of these infectious colds. I refer to their influence on nutrition. This is of somewhat less importance among children of the runabout age, but in any group of bottle-fed infants such infection not only prevents gain but is as a rule, accompanied by definite loss in weight. We are too prone to look on these colds as local affections when they are, in reality, systemic infections. If accompanied by fever, the former strength of the feedings must necessarily be cut down to avoid disturbances which would be caused by formulas which but a short time before the infant tolerated and absorbed. Even when there is but little fever the margin between tolerance and intolerance, ever narrow in such infants, is no longer sustained — gains cease and the weights go down. It has been my experience that whether the loss is caused by the necessary curtailment of nourishment or by the direct demands of the malady on the tissues, or by a frank disordering of the powers of digestion and assimilation the end-result is often the same, namely, the demolition of our carefully constructed edifice of nutrition and a renewed state of malnutrition from which some of the infants may not again be able to rally.

The experience of the ward, to which I first alluded because it is more striking from the number of infants involved, is also duplicated to some extent in private practice. Fortunately we have here to deal with fewer infants suffering from prolonged malnutrition, and even these have, as a rule, the advantage of a more favorable environment. Nevertheless, in conducting any case of difficult feeding in private practice that which we fear most is an intercurrent infection. Excluding the infections of the gastro-intestinal tract, which, if we hold to the former teaching, are largely limited to the hot and humid months, the infant in the home is, as a rule, fairly carefully guarded against the common eruptive diseases of childhood as well as against diphtheria and mumps, since the dangers of such maladies are well understood by the laity.

Not so, however, with the common infectious cold, which, with the sole exception of the regulation of the infant's food, calls more frequently in the winter for the attendance of the children's physician than any other condition or malady. Such colds are an unfortunate handicap in conducting feeding cases in private practice. The outspoken cases with fever are, of course, quickly recognized, but even when they yield promptly to treatment they interrupt the progress of nutrition. When complications ensue, this interruption is often prolonged. Where the cases are subacute, the effects are not generally recognized by the parents. In reviewing the history of an infant showing recent stationary weight, direct inquiries often bring out the fact that the infant has had a cold, the more immediate evidences of which may have largely disappeared. Guided solely by the stationary or downward trend of the weight curve, the food of such infants has often been increased by the mother or nurse, thus precipitating or increasing digestive troubles.

When a group of children in a family becomes infected, we often see established a house infection with, at intervals, recurrent outbreaks, which may extend over a number of months, until the advent of warm weather or the departure of the family to the country. The etiology of these recurrences is not clear. The presence of bacillus-carriers may be readily suspected, but against this theory is the comparative freedom during the summer months, only to be followed by a fresh outbreak of colds as soon as the children return to the city. This experience is so general in New York as to be a matter of common report among parents. Some susceptible children are kept free only by continued residence in the country, but unfortunately suburban colonies and country towns have their own share of infectious epidemics. Nor would I imply that such epidemics are limited to the distinctly cold months. For several years past, sharply infectious colds have appeared at the seashore resorts not later than August, and have been carried thence to the mountains early in September.

The amount of injury done young children each year by such colds can scarcely be estimated. Medical literature contains frequent references to the more recently recognized involvements of the accessory sinuses. Aural complications are so frequent that it is to-day a positive relief when called to see a child with rise of temperature and catarrhal symptoms, particularly if the temperature has been persistent, to find the ears normal and to be able to reassure the mother that the necessity for the otologist, single or double paracentesis, prolonged aural irrigations and a possible mastoid operation is, for the present at least, excluded by the findings. Fortunate indeed is the family containing children, one or more of whom have not suffered from acute otitis media requiring paracentesis.

During the prevalence of such colds, the possibilities of infection are excellent if the young child travels by train, rides in public conveyances or is taken to hotels or crowded shops. Numerous regrettable occurrences have been known to me in which disregard of these dangers has led to serious consequences. One instance, which will suffice, was that of an only child, aged 3, previously well, who was brought to the city for the sole purpose of seeing the Christmas display of toys in one of the large shops. This trip was immediately succeeded by coryza, followed by double otitis, double mastoid operation, and finally, sinus thrombosis. The child finally recovered but paid a large price for a few minutes of unnecessary indulgence.

Children's parties and dancing-schools for the very young come under the same ban It is indeed an open question whether the greatly increased opportunity for major and minor infections where young children are gathered together in kindergartens does not more than offset the real advantages which they offer If we exclude exceptional cases in which the discipline or companionship of the home is deficient, I am of the opinion that safeguarding the health of the young child is the more important consideration, and that any home worthy of the name should be able to furnish all the simple instruction and direction of the play instinct which the young child requires

Assuming that the young child is not subjected to exposure outside the home, there still remains the problem of safeguarding it from infection within the home Measures which will produce this result are, I know, not practicable in the crowded tenement, nor in those ranks of society where limited means and unfavorable environment make it imperative that the baby or other young children be closely identified with the family circle and inhabit the same rooms Nevertheless, there are an increasing number of households in our land where the infant or young child has, or may have if need be, its own room and its own attendant In homes where its welfare is considered paramount, and where neither expense nor personal inconvenience would be allowed to stand in the way, protection of the infant can be secured

The first requisite is a clear understanding by the parent of the direct and indirect dangers from exposure Isolation and quarantine of the affected adult member of a household is not always feasible unless the attack is sufficiently severe to confine the patient to bed Even then the period of convalescence usually renders such measures ineffective On the other hand, isolation and quarantine of the uninfected infant against the family and the majority of the household, although involving some difficulties is not impracticable Indeed the quarantine of the patient is regularly carried out when circumstances are thought to warrant it, as in diphtheria, scarlet fever and measles It is even willingly enforced for mumps and chicken-pox, because the visible brand of these maladies and the traditional dread of such conventional types of infection instantly suggest such measures Yet neither of these two latter affections produces a fraction of the harm wrought by the infectious colds

In addition to a recognition of the sinister possibilities of what often seem harmless infections the isolation of the infant calls more for unselfishness on the part of the parents than for anything else This means that at such times the parent or parents should be willing, if necessary for the welfare of the child to sacrifice their own pleasure in seeing it and playing with it As a principle, this seems simple but it is often the crux of the difficulty in putting such isolation into practice It is also extremely difficult to secure the immediate and complete isolation as a matter of routine of any child in a family of children when it first shows slight symptoms or beginning illness yet by such means I have repeatedly carried young children through house epidemics without their contracting the infection, and thus without interruption of normal growth and well-being

No discussion of this subject would be complete without mention of the occasional causes of infection foremost among which is the introduction of the casual visitor into the nursery Why a coughing or sneezing person should insist on seeing the baby or the maternal pride of the mother lead her to introduce her child into such an atmosphere in the drawing-room passes my understanding unless it be ascribed to sheer thoughtlessness on the one hand and untutored ignorance on the other

It is a comparatively simple matter for the physician to acquaint the mother with the risks incurred and to issue orders that no employee or member of the family having the slightest cold shall enter the nursery and that the direct question shall be put to any visitors before they are admitted With such clear instructions many possibilities are averted the education of the community is furthered and the immediate responsibility is lifted from the shoulders of the physician

It requires at least a decade to secure the acceptance of any new measures by a majority of the medical profession and another to make them the common knowledge of the laity I know of no text-book which as yet teaches the danger of the common infectious cold no medical school in which it is impressed on the student no hospital in which such cases are not retained in the common ward no health board which has yet dared to limit the right of the individual to spread the infection of his coryza among the public These may exist unknown to me, and the convictions to which I can lay no claim of priority will in time make themselves felt in these directions

I do know of enlightened private schools to which parents are instructed not to send their children if catarrhal symptoms develop but in some of these this appears to be more from the fear that such symptoms may be the beginning of measles than from any other reason Few other schools exclude the child unless the cold is well marked and attended by other evidences of illness It is true that the younger the child the more serious as a rule, are the results of such colds, but they do not fail to take their toll from children of school age, as the family physician and the aurist will bear witness

Only recently have we begun to appreciate the ravages of these subtle forms of infection With such knowledge, however goes the moral obligation to throw off our indifference, to face the question fairly, and to do all in our power to lessen the unnecessary morbidity and the too frequent pneumonia, otitis and lingering sinus infection

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ABSTRACT OF DISCUSSION

Dr David E. English Summit N J Certain cases of common cold are due to infection by the *Bacillus influenzae* These are the cases that present great prostration afterward The toxins secreted or produced by the influenza bacilli seriously affect the heart I think that prolonged prostration which follows the common cold is proof that that common cold was due to infection by influenza bacilli In these prolonged prostrations I have found only two drugs that do good One, strange to say, is iron The other is sodium and caffein benzoate I do not mean the mixture in the Pharmacopeia but the combined salt made by Merck So far as I know he is the only manufacturer who makes it In moderate doses every four hours I have found this a great help in assisting children over this prostration The dose is based on a 5 grain dose for an adult Of course prophylactic treatment is fresh air and sunshine Babies who get enough fresh air are not usually affected

Dr. John Zahorsky St Louis Next to the nutritive disturbances are the acute respiratory diseases More than ten years ago I read before a local society in St Louis a paper on the etiology of colds and acute infectious diseases I insisted that all acute diseases of the respiratory tube in the young baby and young child are not due to cold or exposure but to germs caught from somebody else I have been teaching this for the last ten years I train my patients so that the mother will keep the baby away from the rest of the household if any of them have a cold Many of my patients act on that point of their own volition The school child is a very common source of infection to the young baby School children are continually bringing new germs The first baby in a family often escapes colds because it has *not* this source of infection, but in the same family the following babies may continually have colds because the older brothers and sisters are bringing home infections which are more serious to the younger children I think the term "grip" should be used When we speak of grip nowadays, we mean any acute infectious condition of the respiratory tract

Dr H M McClanahan, Omaha I wish to call your attention to two points First—and I am a little surprised Dr Southworth did not mention it—in a series of eleven cases of nephritis, which I reported last year, in five the only etiologic factor was a common cold I believe we frequently have nephritis as a sequela of common colds The second point is the infection of the baby from a nursing mother with a cold I believe that the child can be prevented from taking the cold from the mother if the mother is careful to wear a mask or handkerchief over her nose and mouth when coughing or sneezing

Dr G D Scott, New York It does not seem to me that the cold alone is to be taken so much into account as the condition of the fertile soil, caused by the 'cold," in which bacteria can be implanted In making a clinical study of many cases of 'colds," in the Boston City Hospital, the New York hospitals and in private practice I have found that a large number of the cases have been diphtheritic These colds cause a fertile soil and the influenza bacillus or the diphtheria bacillus is implanted in the nares and reaches the accessory sinuses, the antrum of Highmore, and causes long continued suppuration or chronicity

Dr LeGrand Kerr Brooklyn We should not forget in the study of the bacteriology of these cases that in healthy children there is often present the diphtheria bacillus, the pneumococcus, and various other bacteria, and yet the child may remain in apparently perfect health If we jump at a conclusion in our laboratory work, we shall often assign as a direct cause for these infections bacilli which have no bearing on them until later That is, they are not the primary cause, but are simply present, as they are present in a large proportion of perfectly healthy normal children But they become active factors later in the development of subsequent complications and sequelae, because, as has been mentioned, a soil has been prepared for their development These cases are not prevalent during the heated term, they are prevalent during the winter months wherever children gather in large numbers The common treatment is to house the child up at the first sign of any coryza I believe that is one of the prolific causes of the complications which follow Whether it is in the winter or in the summer, the child should be protected from complications by receiving plenty of fresh, pure air This is something which will more certainly and more quickly limit the occurrence of complications than any other treatment that we can employ It is the avoidance of complications that we seek Isolation is not enough These children do well in summer because of the compulsory fresh air they must have, but in winter they are usually housed up I have within the last few years insisted on the fresh air treatment of all colds and coryzas It has accomplished more in the elimination of complications than any other method of treatment I do not think the temperature of the fresh air has any particular bearing We know as a physiologic fact that no matter what the temperature of the inspired air as it is taken in through the nostrils, it is circulated through the sinuses and reaches the lung at an equalized temperature, and with a definite amount of moisture It is immaterial whether the inspired air is at 70 or 40, when it reaches the lung it reaches it at a uniform temperature in any child

Dr J P Sedgwick, Minneapolis I think we are all agreed on the importance of what Dr Southworth has brought forward and appreciate the character of his work I know Dr Southworth is not entirely satisfied with the naming of this condition, and yet I believe that the first step in overcoming it is to correct the false name which has been used for so many years, that is "cold" Dr Southworth has partially avoided this by calling the cases infectious colds He speaks of the children being brought down into the drawing room, where they are often exposed to infectious conditions These children are usually "wrapped up so that they will not catch cold" and brought down in fancied security I think that if we could unite on some term whereby we would leave out the term "cold" and bring out the infectious character of the condition, we would bring about better results

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THE OCCURRENCE AND ETIOLOGY OF CLUB-FOOT *

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I have been interested in running through the cases of congenital talipes entered on the records of the Orthopedic Out-Patient Department of the Children's Hospital during the past five years The records of this period, under the filing system, are comparatively easy to handle, and previous records offer little detailed information My figures have to do chiefly with the occurrence of this deformity

The number of new patients applying for treatment for congenital club-foot during this period was 232, out of a total number of 4,543, or about 5 per cent of the clinic The number has increased steadily, being in 1907, thirty-one, in 1908, forty, in 1909, forty-six, in 1910, fifty, in 1911, sixty-five This includes all types of congenital deformity, and care has been taken to exclude cases of contracture secondary to paralysis or scar-tissue formation, deformity from trauma, and doubtful cases of all sorts The majority of the cases have been under my observation

During the year 1911, 16,931 babies were born in Boston Of these 1,662 died before reaching the age of 6 months, approximately the average age at which infants are brought to the hospital, and may therefore be eliminated Of the sixty-five new cases of congenital club-foot which appeared at the clinic during this year, seventeen were in babies born in the city of Boston If we accept the estimate that of all the cases of club-foot occurring in Boston in which the patients live long enough to be treated, nine-tenths appear eventually at the Children's Hospital, we can conclude that club-foot appears in this community, roughly speaking, once in every 816 births

The incidence of club-foot has been variously estimated at one in 646 (by Chaussier 100 years ago), one in 1,903 (by Lannelongue fifty years ago), and one in 2,000 (by Little thirty-five years ago) Rudaux and de Lorier[1] give statistics for another purpose which show that club-foot appeared eighteen times in approximately 20,200 births at the Beaujon Hospital in eleven years, and nineteen times in approximately 20 900 births at the Clinique Baudelocque in ten years, or once in 1,110 births The proportion of club-foot to the total number of anomalies and monstrosities, according to their figures, was one in ten

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* Read at a meeting of the Orthopedic Club April 25 1912

[1] Rudaux and de Lorier The Influence of Syphilis on the Production of Anomalies and Fetal Monstrosities Ann de gyn et d Obst, September, 1911, p 400

Of the total of 232 patients 185 exhibited equinovarus, forty-six some other type of deformity, and one had equinovarus of one foot and another type of deformity of the other. That is to say, equinovarus appeared four times as often as all other types of congenital talipes combined, and cases of combination of equinovarus and another type of deformity were rare.

Next in frequency to equinovarus came calcaneovalgus, which appeared in twenty-nine cases, then valgus in five patients, varus in five, equinus in four, calcaneus, calcaneovarus and equinovalgus in one each. I myself have seen but few cases which could not be well classified as either equinovarus or calcaneovalgus. All cases of double deformity in this series showed the same type of talipes in both feet.

I will say in explanation that I have distinguished two types of calcaneovalgus, the fixed, in which the foot is maintained in the position of deformity, and what I have called the potential type, which is far more common, in which the foot hangs flaccid in normal position, but can be made to assume with little or no force the position of extreme deformity. This type is frequently overlooked, or else it is called congenital flat-foot. I have found it to be a frequent cause of delayed walking in children apparently normal.

Why an equinovarus should tend to maintain its position and a calcaneovalgus should be lax is readily explainable. When the fetal foot is forcibly maintained for a considerable time in the equinovarus position the dorsiflexor muscles and the peronei are stretched, while the calf muscles, the plantar flexors and the tibials on the other hand are relaxed, so that they contract and in time become permanently shortened, and the position of the deformity is eventually fixed. With the foot in the calcaneovalgus position the plantar flexors, the calf muscles, and the posterior tibials are stretched. The opposing muscles tend naturally to shorten. But these muscles run to the foot under the annular ligament, making an acute angle, so that they cannot contract. If the deformity is marked, they are stretched, become lax, and the foot hangs flaccid as soon as the causal pressure is removed. There is sometimes sufficient shortening of the peronei, which have a separate annular ligament, to hold the foot in the position of deformity for a few weeks after birth, and this class constitutes the "fixed" type.[2]

One hundred and sixty-one patients were male and seventy-one female, or 69 and 31 per cent, respectively. The proportion of males, however, was somewhat higher in the equinovarus cases (71 per cent) than in the other types of deformity (61 per cent).

There were 130 cases of double club-foot as compared with 102 cases of single deformity, or 56 and 44 per cent, respectively. Of the cases of single deformity 59 per cent were right sided and 41 per cent were on the left. The proportion of double club-foot was somewhat lower (55 per cent) in the equinovarus cases than it was in the other types of talipes (61 per cent).

Some evidence as to heredity or family influence was gained from the records of fourteen cases, all cases of equinovarus. In other words, fourteen patients with equinovarus were related to persons who had some congenital defect. In eleven of these cases the family deformity was club-foot, and this occurred once in the father of the patient, once in the mother's cousin, twice in an uncle, five times in brother or sister, and twice in two brothers or sisters. Eight of these fourteen patients were male and six female, and the deformity was double in twelve.

I attempted to arrive at an estimate of the nationality of the parents. The records give no help in children born in this country except the name of the parents. On this basis and from personal acquaintance I have concluded that 34 per cent of the parents are of Anglo-Saxon, Scotch or native American stock, 31 per cent of Irish birth, 9 per cent of Russian Jewish birth, 9 per cent of Italian, 6 per cent of Scandinavian, 4 per cent of French Canadian and 7 per cent of Polish, Greek, Syrian and other extraction. All the races which we ordinarily see at the Children's Hospital were represented except the colored, of which there was no example in this series, although colored children are frequent at the clinic. I was struck also by the small proportion of Germans, of whom there were only about 1 per cent.

There has been some discussion as to the frequency of the occurrence of club-foot in twins. There is a theory several centuries old that the deformity is more common in multiple pregnancies than in single, for the reason that there is less room in the uterus and the fetuses are crowded together. This has recently been denied by Rugh[7] who, basing his conclusions on the literature and on a study of records of maternity hospitals, declares that in twins the deformity is unusual.

In this series eight patients were recorded as being one of twins and one was of triplets, making nine examples of multiple pregnancies in all, or 4 per cent. This is about four times the normal rate of occurrence of multiple pregnancies. The cases of multiple pregnancy were only half as common (3 per cent) in equinovarus patients as in those with other deformities (6 per cent). Five of the patients were male and four female, and the deformity was double in six cases. No patient showed any other deformity. Of twins two were brothers; in five the other twin was normal and in one the other twin died at birth. Of the triplets one was normal and the other one had died.

Some interest attaches to the size of the family in which club-foot occurs. Mothers who bring their infants to the hospital are asked how many children they have had. There is only an occasional exception to the rule that club-foot patients are brought before they are 9 months old, so we may take it for granted that the number given by the mother represents children borne before the patient. My figures on this point will err, therefore, in making the number previously borne slightly too large. Sixty-eight, or 30 per cent, of the patients were first born. In the other 70 per cent the average number of children previously borne was 3[illegible]. The number ran up as high, however, as eleven and twelve, and there were six instances of previous families of ten or more.

As regards labor, the 200 histories which record it give thirty-three, or 16 per cent, as being difficult, necessitating the employment of ether and forceps. Of the deliveries 78 per cent were stated as being normal. Two cases were given as breech presentation and nine infants were premature. The percentage of premature births was less in equinovarus ([illegible] per cent) than in other types of deformity (15 per cent). Several full-term babies were so puny and undersized as to resemble premature infants.

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[2] Compare Turner H Ueber die Beziehungen der Klumpfussbildung und anderer kongenitaler Deformierungen der unteren Extremitäten zu fötalen Zwangshaltungen und zur [illegible] angeboren Leistenhernie Hydrocele usw Ztschr f Orthop Chir 1910 xxvii 2[illegible]7

[7] Rugh [illegible] Orthop Surg [illegible]

The occurrence of other congenital deformities in conjunction with the talipes was by no means uncommon Other congenital deformities were present in thirty-one cases, or 13 4 per cent They were only half as frequent in equinovarus patients (11 3 per cent) as in other types of club-foot (22 per cent) Double club-hands were present in six cases, contracted knees in six, mental deficiency in four, spina bifida in three, dislocated hip in three, dislocated knee in three, hydrocephalus in two, and two were blue babies, amniotic groove, congenital scoliosis and cleft palate occurred once each Other developmental deformities or deficiencies of the limbs occurred in eleven patients Umbilical and inguinal hernia were observed several times, as was also a condition of the foot in which the heads of the metatarsals are arranged in a semicircle, so that the first and fifth nearly approximate, and which I have called "prehensile foot" In eight of the babies there were multiple deformities

It is interesting to compare these findings with the statistics of Rudaux and de Lorier, which, being compiled for other purposes, must be considered unbiased Of the thirty-seven cases recorded, twenty-three, or 62 per cent, were uncomplicated and fourteen, or 38 per cent, were complicated by other congenital deformities Nine (or 24 per cent of the total) exhibited spina bifida, two spina bifida and hydrocephalus, one cleft palate and hypospadias, one club-hands, and one amniotic groove and digital malformations In explanation of the discrepancy between their figures and mine it may be stated that in cases which are badly complicated the patients are likely to die without coming to treatment for the deformity, moreover, there were possibly cases of mild grades of club-foot in their series which were overlooked, the observers not being orthopedists

A consideration of these accompanying deformities, in a way offering confirmatory evidence as to the forces involved, leads to interesting speculation on the etiology of the condition. In four of the above-mentioned cases occurred excellent examples of the so-called perineal position of the feet The young infant in relaxation would bring the knees up on the abdomen and flatten the feet against the perineum in the position of deformity, just as if he were trying to make himself up into the smallest package possible There is no question in my mind but that this represents the effect of an intra-uterine condition, and is the mechanical result of close packing of the fetus in the later months of pregnancy Other definite evidences of a similar nature occurred in the bowing of the shaft of one or more bones of the leg, which was observed four times in this series, marking a point where the crossed legs fit into each other, and of such a sort as to allow a closer approximation of the limbs to the body

All sorts of more or less tangible theories as to the etiology of club-foot have been offered, and the literature on the subject is considerable No explanation that I have met seems to cover the entire field satisfactorily The theory which I have adopted is simple and for the present, I think, adequate

Congenital club-foot is the result either of some tendency to the production of the deformity inherent in the fertilized ovum, or of causes acting after the implantation of the ovum If it preexists in the germ, we may call it germinal or inherited It seems fairly clear that heredity is the determining factor in a certain small percentage of all the cases of talipes, just as it is in such deformities as polydactylism, polymastia, etc There are well-authenticated cases of club-foot appearing in several members of a family, and cases in which father apparently transmits it to son Little has traced it on the paternal side through four generations Adams cites a case of a man of 46 having double congenital equinovarus, with five club-footed children, a club-footed nephew, and a club-footed grandchild Lannelongue tells of a woman of 25 with double congenital equinovarus, whose father and whose baby have the same deformity In my series, 5 per cent gave a history of the occurrence of club-foot in a near relative, and this figure, corresponding exactly with that of Ketch,[4] who found ten in 196 cases showing unmistakable heredity, may be taken to represent the approximate frequency of inherited club-foot It is significant to note that these were all cases of equinovarus, usually double, and in no case accompanied by any other deformity

The causes which act on the organism *in utero* may be divided into two distinct classes early causes, acting on the ovum or young embryo, and late causes, which exert an influence on the developed fetus The deleterious agencies which may work on the ovum have been expounded by Professor Mall in his work on "The Causes Underlying the Origin of Human Monsters" He demonstrates that what he calls a faulty implantation of the ovum, as in the presence of endometritis and other diseased conditions of the uterus, and in tubal pregnancy, may lead through interference with the nutrition of the embryo to degenerative changes of such nature that the embryo dies, or, if it survives to term, develops into a monstrosity In certain of the minor grades of monstrosities, as spina bifida, hydrocephalus and cleft palate, the fetuses are viable, and in such cases of slight malformation, accompanying the general retardation of development, there is likely to be marked impairment in the development of the extremities In all cases of this class there is a tendency to an increase in the quantity of amniotic fluid

The only definite basis on which we are justified in classifying cases of talipes as being of embryonic origin is the association with other conditions which we are reasonably sure are the results of arrested or impaired development *in utero* As such we may class spina bifida, hydrocephalus, certain developmental deformities or deficiencies of the limbs, cleft palate, constriction rings and patent foramen ovale, and I am inclined to place in this division cases of premature birth and of mental deficiency, making a total of 10 per cent I do not believe that, as Mall would allow one to infer, an embryo can be subjected to a general nutritional disturbance early in its history, even if only temporary, develop normally and be delivered as a healthy well-developed child with nothing to show for it but a club-foot

Finally comes the third class of cases, to which the majority evidently belong, arising from mechanical causes acting later in the development of the fetus The theory of the mechanical origin of club-foot, and, by the same token, of club-hands, contracted or recurved knees and dislocated hips, which frequently complicate club-foot, has appealed strongly to most men who have concentrated their attention on the study of this deformity Hippocrates and Ambroise Paré expressed themselves definitely in its favor, and the theory has been advocated in one form or another by a long line of more modern students, including Cruveilhier, von Walter, Bellartin, Ferdinand Martin, Duval, Volkmann, Kocher, Bruckner, Holmes Coote, Boyer and Parker

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[4] Ketch Etiology of Club Foot Tr Am Orthop Assn, 1892 v 159

Just how the deformity is produced cannot always be definitely stated. The cases that occur in twins or in the presence of oligamnios or of uterine tumors can be explained by a crowding of the fetus. In some cases we often find evidence of mechanical interference with intra-uterine development in the infant itself. Frequently, as already stated, a young infant with club-foot, if stripped and allowed to relax, will voluntarily reconstruct the position which it maintained in the latter part of pregnancy; it will bundle itself into a cast of the interior of the uterus, so that the action of the uterine wall in causing or maintaining the deformity is strikingly evident. There are certain type positions which the feet assume. Many cases of this sort have been pictured by Martin, Parker, Turner and Whitman. Other evidences of uterine pressure in such cases may be seen in the grooving of crossed limbs, in the imprint of a foot on distorted features, and in the occurrence of hydrocele or inguinal hernia as the result of local pressure.

A decrease in the quantity of amniotic fluid need not necessarily be postulated; the foot may be caught in some position from which it cannot extricate itself, as in the axilla or over the shoulder, or the two feet may interlock in such a way as to interfere with normal development, which conditions have been observed, or the fetus may occupy a disadvantageous or constricted position from which it is unable to free itself by its own activities, so that the foot is maintained for a considerable time in one position, and the position of inversion which is normal in early fetal months is not allowed to correct itself, in accordance with the natural course of events. Too little is known, even by obstetricians, of the position which a fetus may assume at different stages of pregnancy, of the factors which interfere with the natural changes in position, and how far such modifications of the normal may exert a deleterious effect on the development of the fetus. There is, however, a great deal of promise in the systematic study of the pregnant uterus by the *x*-ray, which recent developments and refinements now make possible.

In a considerable proportion of cases it is probable that external and accidental influences play an important rôle, and in some instances the records have given a hint as to a mechanical causal factor, real or imagined. For example, the mother has occasionally referred to a trauma or shock which she suffered while carrying the child. One said, for instance that the baby was "crushed in the womb." The occurrence of tumors of the pelvis or of other pelvic disease in the mother was never definitely ascertained. Occasionally I have been told that miscarriage was feared at some time during pregnancy, and a few times I elicited the information that excessive coitus was indulged in during pregnancy.

The one constant factor which I have arrived at is the rather poor social status of the patients. Practically without exception the mothers were of a class that is compelled to do a certain amount of work during pregnancy. I have found that some were employed in factories or elsewhere, and some were in service as domestics; a few were the support of their families. The majority of the mothers were housewives doing their work without help, and sometimes for families of considerable size. A certain number have stated with some pride that they did their own work up to within a few hours of delivery. Others have worked hard at the sewing-machine.

The statement has been made that club-foot and other congenital deformities appear frequently in the children of those who have reasons for hiding the pregnancy, as the unmarried and those in service. This series offers no further corroborative evidence of this than the fact that in three cases illegitimacy is stated. Personal observation leads me to think that in certain other cases the child was not accorded a very grateful reception.

The easy criticism of these findings may be offered that they depend on statistics taken from an institution in which one would naturally expect to deal with the poorer class of people. But the average financial condition of the families of which the children are being treated in the orthopedic out-patient clinic at the Children's Hospital is much better than might be expected. Many are in good circumstances, coming from other cities and states and willingly put themselves to a considerable expense to carry out a long course of treatment. And on the other hand, club-foot is not frequently seen in the private practice of orthopedic specialists of this community, among the wealthy. I have seen a few such cases, but in each instance there have been accompanying conditions which suggest an embryonal rather than a mechanical etiology.

SUMMARY

Congenital talipes occurs approximately once in every thousand births, and in one-tenth of all infants with congenital deformities. In the past five years at the Children's Hospital orthopedic out-patient department 232 new cases have been treated, constituting 5 per cent. of the new patients for that period.

Of the two important types equinovarus constitutes about 80 per cent. and calcaneovarus 20 per cent. Forms which cannot be classified under one or the other of these divisions are rare. The fixed type of calcaneovalgus is less common than the potential type. Equinovarus on one foot and calcaneovalgus on the other is quite unusual.

About 70 per cent. of the patients are male and 30 per cent. female; 55 per cent. are double and 45 per cent. single. Of the single cases 60 per cent. are right and 40 per cent. left.

Club-foot is known to have appeared in near relatives in 5 per cent.

About 33 per cent. of all the patients are first-born; in about 16 per cent. delivery is difficult; in 4 per cent. birth is premature and in 2 per cent. illegitimate. The condition appears in twins or triplets four times as often as in single pregnancies. It is accompanied by other congenital deformities in 12 per cent. of all cases.

There are three etiologic factors to be considered: heredity, evident in 5 per cent.; early intra-uterine causes depending on faulty nutrition from a diseased condition of the chorionic villi, evident in 10 per cent., and mechanical causes operating later in intra-uterine life, accounting probably for most of the remainder. In the last class poor hygiene of pregnancy and work during pregnancy are undoubtedly causal factors of considerable importance.

362 Commonwealth Avenue.

The Danger of Purgatives When a Patient Cannot Pass Wind.—Avoid them (purgatives) all the more if the patient cannot pass wind. There is no question about the immense difficulty in getting the bowel to be satisfactorily emptied. It is a matter of totally different significance to be unable to pass flatus. And if your patient is unable to pass any flatus you must not give any kind of aperient [illegible] have the least suspicion that a [illegible] not give any aperient at all. [illegible] in giving is an enema.—Author [illegible]

THE VALUE OF THE SOCIAL SERVICE DEPARTMENT TO THE CHILDREN'S DISPENSARY *

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PHILADELPHIA

So varied are the ways and means by which the social service department may be of assistance to the dispensary physician that the title of this paper might just as well have read "The Values of the Social Service Department to the Children's Dispensary." Advice and directions, although carefully explained to the person who accompanies the young patient to the dispensary, are frequently received with scant attention and sometimes partially or even totally forgotten by the time the child has reached home. Even detailed directions, minutely written out, may never come into the hands of the child's parents. And finally, even if the note does reach the parents, the physician's advice and directions may nevertheless remain unheeded.

It was primarily with the object of having our directions correctly carried out that the social service department two years ago began to work with the children's dispensary. It was soon found, however, what a wide field of usefulness was opened to the visiting nurse and through her not only to the physicians at work in the dispensary but also to the philanthropic men and women supplying the funds to carry on the work.

WORK OF THE NURSE

When a sick child is observed in the dispensary, explicit directions are given to the trained nurse the same afternoon, sometimes while the child is present, sometimes later. If the nurse is in the room when advice is given, the child will recognize her when she visits the home, as she does within twenty-four hours. The same written orders which have been explained to the child's mother are also given to the nurse. On her arrival at the child's home, she explains the physician's directions fully and with great detail and shows the mother how to carry out each separate order. She sees that the sick child is correctly cared for, instructs the mother in preparing the food properly and in giving water to drink at regular intervals, in the matter of bathing or sponging, in correct bedding, covering and clothing, in nursing, cleanliness, hygiene and sanitation. She shows which windows and doors should remain open, when to leave the child alone for sleep, how to dispose of the excreta, how to keep other persons out of the sick-room — in short, how to make the conditions as nearly ideal as is possible under existing circumstances. If she finds the surroundings absolutely impossible, she reports the conditions to the physician, or in urgent cases makes arrangements for the child's immediate removal to the hospital.

She also learns the financial conditions of the entire family, the sanitary conditions of the whole house, the number of families living in the house, the cleanliness of furniture and bedding, the presence of unnoticed or untreated illness, defects or deformities among other members of the family or in a tenement house of the neighbors' families, whether work is done on the premises and, if done, what kind of work, and what sort of work is performed by the various members of the family. She tries to refer these people to the different departments of the hospital for whatever treatment she thinks necessary, as, for example, to the nose and throat dispensary for adenoids, to the nervous dispensary for electricity and massage, or to the laboratory for tuberculin or Wassermann tests, she sees that children return to the children's dispensary from time to time, sends other children for examination or treatment, secures hospital care for those too ill to visit the dispensary, sends some to the seashore, to special sanatoriums or to open-air schools, gets out-door jobs for convalescents and other employment for others, gives careful instructions to those about to become mothers, and refers the needy and undecided to the chief of our social service department, Miss Helen Glenn, for her counsel. It is a pleasure for me to acknowledge here our great indebtedness to Miss Glenn and her assistants.

In cases in which there is possibility of an acute infectious disease, and in any case of gonorrhea, syphilis or tuberculosis, the nurse arranges for the isolation of the patient and instructs adult members of the family as to the means and manner of preventing further contagion in that household. If isolation is impossible, she persuades the family to allow the child to be removed to the special hospital for the treatment of contagious diseases. In case of extreme poverty, or when there is insufficient food or clothing, she tries to find means to ameliorate existing conditions. The patient is usually taken to the hospital, and some charitable organization is asked to investigate and relieve the family. When the nurse suspects that children may have been or are being abused, she directs the attention of the Society to Protect Children from Cruelty to the family. She may also arrange for the free dispensation of medicine to members of such families, on the physician's request.

The nurse may also be instructed to leave printed "diet" and "don't" lists in homes in which there are children, to wash out a stomach or to irrigate the intestines, to give special baths, spongings, oil rubs or massage, and to give minute instructions for the preparation and administration of food and medicine. She may also be able to secure specimens of sputum, urine and feces for examination, if the physician desires. She tries to impress on pregnant women the importance of care before and after delivery, and urges mothers to keep their infants with them; she also tries to correct certain bad family habits, such as the lack of toothbrushes, the common custom of leaving food uncovered, exposed to dust and flies, a family, including one or more sick children, congregating about the kitchen range in cold weather with doors and windows all tightly shut, or the prevalent habit of children rushing off to school without having had any breakfast or after hastily swallowing some fresh cinnamon bun or roll, with a drink of tea or coffee.

Should there be no older person to accompany the child to the dispensary, the social worker tries to find some one to bring the patient to the doctor regularly. If a child should suddenly grow worse, she arranges to rush both mother and baby to the hospital, and if the person who accompanies a child should chance to become ill or to faint while in the hospital, some one is provided to see that they both reach home safely. The remarks of the visiting nurse have been the means of stopping, in many homes, not only the use of patent medicines but also the old custom of "baby pacifiers." Many children with defects of speech, spinal curvature, back-

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

wardness, adenoids, otitis or enuresis, which so many parents consider incurable, have been brought for treatment and improved if not cured. Besides, places as domestics have been found for mothers with or without their children. It would not be difficult to refer to many instances of what appeared to be trifling matters in which the existing problem was solved with the aid of the social service department, eventually making an entire family again independent.

In the feeding of infants and children much has been accomplished. The nurse, who continues her visits even after the child seems well, can encourage breast-feeding until warm weather is over, can keep away all other foods, can teach the habit of feeding at regular intervals, can arrange for a wet-nurse if the physician wishes, or can teach the proper preparation of the baby's food under the doctor's orders. She can oversee weaning when the time arrives, and the general care and feeding of the older children, preventing the common indulgence in sweets, fresh cake and bread, especially between meals, and the overindulgence in tea, coffee and fried foods of all kinds.

Our best results were achieved in the acute gastro-intestinal attacks of infants in the summer. Here the elimination of the cause, which is always the food, saves the baby. No matter how carefully, how urgently or how decidedly the physician tries to impress on the baby's mother the importance of this fact, a friend, a neighbor or frequently the baby's grandmother persists in feeding the baby. But when a nurse comes into the household daily, prepares the boiled water or lactose solution and makes the mother understand, often through an interpreter, that any food may kill her baby, we get results. Three of our case histories follow, one from each of the summer months.

REPORT OF CASES

CASE 1.—Baby C, 18 months old, of Italian parentage, the only child (one of twins, the other having died nine months before) was brought to the dispensary, June 28, with a history of vomiting and diarrhea for three days. She had been partaking of all the food that her parents ate. Her temperature was 103.2 F. All food was stopped and only lime water and cinnamon water and 5 per cent. lactose solution were allowed, beginning with one-half ounce at a time need. The nurse, who was present in the dispensary, visited the family the same afternoon and showed the mother how to prepare the solution. The next day, as vomiting had ceased, the quantity of lactose solution was gradually increased; the day after that whole milk was added and this was readily increased until the mixture was one-half milk. Five days after the nurse's first visit the baby was well, on undiluted milk. The mother has been very grateful, bringing the child back for every trifling ailment.

CASE 2.—Baby A, 6 months old, ninth child of Italian parents, was brought to the dispensary July 14. He had been weaned almost two months earlier and was taking 5 ounces of mixture of milk and water (2½ ounces of each) every three hours. He had been vomiting and his bowels had been loose and stools green for three days, though he had refused his bottle; his mother kept urging food on him. His temperature was 104.4 F. As the mother refused to allow him to remain even for a day in the hospital he was given castor oil and sent home. The nurse visited him that same afternoon, showed the mother how to sponge him and to prepare the lactose solution. Two days later he was put to both breasts every three hours for five minutes, followed by the lactose solution. This was continued, a little milk being added to the lactose solution. In six days he was back on the breast solely and was doing well. In this family some of the other children were brought to the hospital for treatment and diagnosis and others were sent to the seashore.

CASE 3.—Baby D, the fifth child of Russian parents, with a tuberculous mother and sister, was brought to the dispensary first in July with indigestion because of being nursed too often and being allowed to take too much at each nursing. When 3 months of age, in August, he was brought back ill with diarrhea and vomiting and a temperature of 101.4 F. On being taken from the breast, given a dose of castor oil and put on lactose solution he fully recovered in twenty-four hours. In this family no single member has been without some benefit from the work of our social service department.

During the summer of last year, for the first time in ten years, I did not have to sign one death certificate in the dispensary and so far as I can discover only two of our patients were admitted to any hospital in a moribund condition. We were unable to observe a single case of cholera infantum and the only really ill infants were found among the foreigners, the Russians and Italians. From this it is evident that while our former campaigns in the education of mothers in preventive medicine have benefited those who could talk and understand English, we have not yet been able to reach the foreign population. While the nurse did good work in preparing the feedings, she also explained to those women the ordinary rules of hygiene both before and after delivery, fresh air, bathing, water to drink, clothing, covering and the myriad trifling details of which so many mothers are woefully ignorant. Her other great work was in urging mothers *not* to part with their children!

It is then no idle boast for me to terminate with the statement that with the assistance of our social service department the children's dispensary has been able to save many lives (especially among infants of foreign parentage), much contagion, illness, worry and even expense. It is my hope that the possibility of usefulness in this field may deeply impress you. Far as our work has gone, the field of usefulness to humanity seems still wider. There can be no doubt that contributions will never fail to be forthcoming to support work of such a philanthropic character.

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ABSTRACT OF DISCUSSION

DR. H. J. GRAMLING, Milwaukee: There is one thing which I think would help in this work. It should be made harder for the people who feed their babies sausage to get death certificates. They should be made to understand that a meal of sausage for babies is as dangerous as a dose of arsenic. In Milwaukee every birth is reported in the papers. Within the next two or three days the mother receives through the mail literature on soothing syrup and babies' food. At that rate the state is really helping the patent medicine people to introduce poison into the household. I do not know whether this is simply a local condition peculiar to our town or not. If it is a general condition I think this Section should take action to bring it before the postal authorities.

DR. M. H. FUSSELL, Philadelphia: At the University of Pennsylvania we owe the installation of the social service department to the late Dr. John Musser. Five years ago he visited Boston and was impressed with the social service work in the Massachusetts General Hospital. He then by personal solicitation and contributions raised a large sum that started the social service department. The effect of the social service work has been marvelous. Perhaps the most brilliant results have been in the Children's Dispensary. For instance, in the care of tuberculous [illegible] been most helpful When we get a case of tuberculosis, we at once follow it up by one of the special social workers, under the superintendent, who makes it her duty to visit the home and see that the instructions of the physician are carried out, to look after the general hygiene of the family, to report other cases, etc Dr Ostheimer's paper may have conveyed the idea that the nurse or the social worker who followed the case directed the child to be taken to the dispensary, and have the tonsils and adenoids removed, or to be taken to some other place for medical attention That is not the fact One of the things that is impressed by the head of the social service department on her subordinates is that the directions of the physician in charge of the patient be carried out, if anything additional has to be done, that particular physician is consulted The difference between our treatment now and previous to the last five years is marvelous We know exactly how our patients are doing, whether well or ill Every dispensary in the University of Pennsylvania, if it so desires, can refer a case to the social service department, and that case is followed up If the patients do not deserve free medical service, they are directed to the proper physician Thus we overcome the abuse of free dispensaries

Dr T B Cooley, Detroit Anyone who has done work among children of the poor knows that we are not doing more than a fraction of what we should do when we simply see them at a dispensary and prescribe for them, for we are not at all sure that our directions will be carried out or administered properly The practice of medicine among the poor, and especially among children, is becoming more and more to be quite as much sociologic as medical, and this must be taken into consideration We should all realize that the time has come when we are not doing justice to our patients unless we go into sociologic as well as medical problems

Dr D J M Miller, Atlantic City, N J Dr Gramling spoke of the "patent medicine" people distributing samples of soothing syrups In Atlantic City—a city of about 48,000 permanent inhabitants and many more temporary ones—two of the largest proprietary food manufacturers in the country maintain two nurses who will go to any house and instruct the mother and will take full charge of the baby, furnishing all material free Last fall I saw a child with scurvy fed on malted milk by one of these nurses Physicians send for these nurses to feed the babies—quite a commentary on the pediatric teaching in some schools This, I believe, also occurs in other cities, Philadelphia for instance Social service, I think, will combat this and many similar evils

Dr Charles Douglas, Detroit Dr Miller's remarks reflect on the medical teachers as being neglectful We might as well draw the line sharply and clearly It is not the fault of the pediatric teachers they are not doing their work poorly It is carelessness or laziness of the students who go out into practice and just slide along the road on which they have the least trouble We have to contend with the inherited idea that the old woman knows better how to feed the baby than the physician does It is the graduate who passes out and who ceases to be guided by the instructions which he has received from his teachers who errs We have also to contend with the historical thoughts handed down to students by men who studied medicine twenty five or thirty years ago Let every one of us who is connected with a medical college read up the pediatric thoughts and utterances made by other members of the faculty with which he is associated and let him see how many of those men are putting out the right ideas in pediatrics We are in a state of evolution It behooves us all to work along that line remembering that in the gradual process of evolution the teaching faculties will gradually come up to that point in pediatric thought where we are trying to place our students at present No doubt our young students who are being taught to day and who will teach pediatrics later will be better examples than many of the teachers of to da , who were not taught correctly It is just as impossible for me to give instruction in recent surgery, of which I know little, as it would be for these men to give instruction on pediatric subjects of which they know very little

Dr M Ostheimer, Philadelphia I hope I did not give the impression that the nurse does all these things on her own responsibility She always refers the children to me Adults are referred to the various other dispensaries, and if they do not belong there, the chief refers them to someone else

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THE INJECTION OF RHESUS MONKEYS WITH BLOOD FROM PATIENTS WITH "RHEUMATIC FEVER"*

OSCAR M SCHLOSS, M D
NEW YORK

The clinical picture of acute rheumatic fever suggests strongly that the disease is due to some infectious agent Although several microorganisms have been isolated from cases of this disease yet none has been obtained with sufficient frequency to establish conclusively a direct etiologic relationship For this reason it seemed of interest to attempt to determine whether the disease might be due to some undiscovered virus which could not be isolated by the usual methods

Defibrinated blood obtained from patients with rheumatic fever was injected into rhesus monkeys Only typical cases were selected The blood was taken before active treatment was begun and during the acute stage when the disease was spreading from joint to joint—the time when it seemed most probable that the causative agent would be present in the circulating blood The blood was obtained in large test-tubes, defibrinated by means of glass beads and injected within three hours from the time it was obtained Every effort was made to keep the blood warm

PROTOCOLS

Monkey 1 —Five c.c of defibrinated blood were given intraperitoneally No symptoms developed One month later an intravenous injection of 15 c.c of defibrinated blood from another patient was given The animal remained entirely well

Monkey 2 —On the first injection this animal was given about 3 c c of defibrinated blood intravenously and about 2 c c subcutaneously He was watched for one month, no symptoms occurred A second injection of the same amounts of blood from another patient was given The result was negative After an interval of three weeks a third injection of 10 c c. of defibrinated blood was given intravenously The animal remained well

Monkey 3 —Ten c c of defibrinated blood were injected intravenously The result was negative

Monkey 4 —Twelve c c of defibrinated blood was given by intravenous injection No symptoms occurred [1]

These experiments fail to show that the blood of rheumatic fever patients contains an infectious virus capable of affecting rhesus monkeys Either the causative agent of the disease is not present in the circulating blood in sufficient quantity, or, if it is present, rhesus monkeys are immune to its influence

The material used in the experiments was obtained from the medical services of the New York and St Luke's hospitals

172 West Seventy Ninth Street.

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* From the Pathological Laboratory of St Luke's Hospital, New York The expense of this research was defrayed by the Bush Fund for the Study of Arthritis

[1] Defibrinated blood from three of the patients was injected *into the ear veins of rabbits in the following amounts* Rabbit 1 was given 2 c c Rabbit 2 3 c c and Rabbit 3, 4 c c Two guinea pigs and three rats were given intraperitoneal injection of 2 to 4 c c of defibrinated blood from the same patients With the exception of the direct effects of the injection of the foreign blood none of the animals showed any definite symptoms.

THE VALUE OF SERIAL RADIOGRAPHY IN GASTRO-INTESTINAL DIAGNOSIS *

LEWIS GREGORY COLE, M.D.
NEW YORK

This is essentially a summary of a series of three articles on the "Radiographic Diagnosis of Gastro-duodenal Lesions," the first two published respectively in the December 1911 and the March, 1912, issues of the *Archives of Roentgen Ray*. The third will appear in an early issue of the same periodical.

Two or three radiographs are sufficient to determine the size, shape and position of the stomach. For the convenience of indexing the different types may be grouped into four classes: (1) cow horn, (2) text-book, (3) drain trap, (4) fish-hook (Figs. 1, 2, 3, 4), but in cases of suspected pathologic conditions one is not justified in making a diagnosis unless serial radiography is employed. This term is applied to a series of from fourteen to twenty-four radiographs of various phases of different cycles, which, when assembled, may be studied individually and collectively, or reduced to a cinematographic size and projected on the screen, giving a graphic and fairly accurate representation of the gastric motor phenomena. The technic of this examination enables the operator to observe on a fluoroscopic screen grossly what is registered in detail on the plate.

This method of examination illustrated in Figure 5, has demonstrated that the motor phenomena of the stomach are complex instead of simple. They constitute a cycle similar to the heart action composed of a systole (Phases 1 to 6), and a diastole (Phases 7 to 10), and the progression toward the pylorus of a series of peristaltic contractions. A cycle occurs about once in three seconds, and at the end of a cycle, a peristaltic contraction should have moved up to the position occupied by the preceding contraction at the end of the previous cycle. If a contraction progresses from its origin to its termination at the pylorus in a single cycle (Fig. 1), that stomach exhibits the one-cycle type of gastric peristalsis. If two cycles are required for it to progress from its origin to its termination, the peristalsis is of the two-cycle type (Fig. 2). If three or four cycles are required, it is of the three-cycle (Fig. 3) or four-cycle type (Fig. 4). The last two are the most common types. The gastric cycle is governed somewhat by respiration, perhaps through the vagus, which supplies impulse both to the diaphragm and to the stomach. This suggests a method by which gastric peristalsis may be stimulated.

That portion of the gastro-intestinal tract previously known as the first portion of the duodenum has the embryologic, physiologic and surgical characteristics of the stomach, rather than of the small intestine. The important part that its radiologic appearance plays in the diagnosis of gastric, duodenal and gall-bladder lesions justifies its being dignified by a name, and the manner in which it sits up on the pylorus so closely resembles a cap that this name immediately presented itself. Radiologically this cap appears to be a continuation of the stomach, and resembles the pars pylorica in size and shape (Figs. 9 to 14). It should be symmetrical, although its shape varies with the gastric cycle and the posture of the patient. The cap surmounts the pylorus, being separated from it by a space of about three sixteenths of an inch, which indicates the normal pyloric sphincter. The gastric and duodenal surfaces of the sphincter should be clear-cut and smooth, and its lumen about one eighth inch in diameter, and centrally located. In cases of adhesions in this quadrant of the abdomen from gastric or duodenal ulcers, or from gall-bladder infection, with or without calculi, the cap is usually the first to suffer limitation in its normal dilatation.

To determine the lumen of the second and third portions of the duodenum *artificial dilatation of the duodenum* may be accomplished by passing a pyloric dilator (Einhorn) into the jejunum. This, when inflated, acts as a temporary obstruction. The bismuth and buttermilk then passes through the sphincter, dilating the second and third portions of the duodenum (Fig. 26).

The gastric and duodenal lesions that may be recognized by the use of serial radiography are:

1. Carcinoma (Figs. 6, 15, 16).
2. Hour-glass contraction (Fig. 7).
3. Adhesions from gastric or duodenal ulcers (Figs. 17 and 18 respectively), or gall-bladder infection, with calculi (Fig. 14) or without calculi (Fig. 20).
4. Dilatation of the pars pylorica from obstruction (Fig. 23).
5. Atonic dilatation (Fig. 24) with or without prolapse of the pylorus.
6. Atrophic contraction (Fig. 25).

The following radiographic findings are characteristic of carcinoma. The lumen of the stomach is encroached on by a nodular growth in the wall of the viscus, with islands or projections into the normal tissue, giving the appearance of finger-prints (Figs. 6 and 16). The growth may progress in the form of a cone (Figs. 6 and 15), terminating at its apex in a small constricted lumen, which may be filled with bismuth or entirely obliterated or the line of invasion may have a worm-eaten appearance with overhanging edges. The area of constriction is constant in size, shape and position, and devoid of peristaltic contractions or rugæ, although it may be filled and emptied during each cycle by the peristalsis of the normal portion.

The characteristics of hour-glass constriction of the stomach are illustrated in Figure 7. The constriction is narrow, having the appearance of a ring with clear-cut edges. It resembles a peristaltic contraction, except that it does not relax during diastole. The upper segment is large in proportion to the lower one, which corresponds in size and shape to a normal empty stomach. A deep crease or spasmodic contraction in the greater curvature near the spleen so closely resembles an hour-glass constriction that at least two series of radiograms must be made with the patient in various postures before one is justified in making a diagnosis of hour-glass stomach.

Adhesions involving the pylorus and duodenum indicate, in a large percentage of cases, the presence of an ulcer of the stomach or duodenum, or gall-bladder infection, with or without calculi. The radiographic indications of adhesions are illustrated in Figures 8, 17, 18, 19, 20, 21 and 22.

1. The lumen of the affected area varies in diameter but does not dilate to its normal size.
2. The rugæ in the affected area show with unusual distinctness, having a crinkled appearance, and usually run obliquely or transversely.
3. The peristaltic contractions are clear-cut in the normal portion, but cease or are distorted when they reach the adhesions.

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* Read in the Section on Practice of Medicine of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

* Because of lack of space Figures 21 to 26 have been omitted in THE JOURNAL. They appear in the Transactions of the Section and in the author's reprints.

4 The cap is constricted, asymmetrical, displaced or absent
5 The sphincter is not clear cut and well defined, and is much wider than it should be, either on one surface, forming a wedge shaped area, or on both surfaces, giving an annular appearance
6 The second and third portions of the duodenum are angular or contracted
7 The stomach may be bound to an adjacent viscus, and conform in shape to the lines of the liver, gall bladder or colon At the point of adhesions on the lesser curvature peristalsis ceases, and the contraction on the greater curvature becomes deeper, compensating for its absence on the lesser curvature

A small localized constriction in the body of the stomach or pars pylorica, having the appearance of an embryonic hour-glass contraction, associated with a distortion of the rugæ, suggests an ulcer of the stomach, old or new

If the cap is contracted and worm-eaten, but not drawn to the right, and the duodenal surface of the sphincter is irregular, duodenal ulcer should be considered

Extensive adhesions, involving the right side of the pars pylorica, drawing that portion of the stomach to the right and straightening out the greater curvature, the cap being of normal dimensions, but angulated, and the sphincter being normal, suggest gall-bladder infection, with or without calculi

The differential diagnosis of carcinoma from adhesions or hour-glass stomach is very important In extensive cases this may be made with great accuracy, and many non-operable cases may thus be saved the shock of an unnecessary exploratory operation Even in early cases the radiologist can differentiate between malignant and non-malignant lesions with about the same degree of certainty as can the surgeon at an exploratory operation, without a microscopic examination of the specimen It is more conservative, however, for the radiologist to state the character, location and extent of the adhesions, and leave the surgeon to determine the cause The important question is, Do the radiographic findings indicate surgical procedure? If there is any radiologic evidence of malignancy, surgical interference is indicated, regardless of whether or not the symptoms are severe enough to justify this procedure But if there is no evidence of malignancy, the cases group themselves radiologically into three classes

1 Adhesions with or without dilatation of the stomach, accompanied by symptoms sufficiently severe to indicate surgical procedure (Fig 22)
2 A definite lesion without sufficient symptoms to justify surgical procedure (Fig 21)
3 Definite radiographic findings, with obscure but prolonged symptoms, referable to the right hypochondrium

Dilatation of the stomach may be recognized by other methods of examination, but it is of two types, one from pyloric obstruction, and the other from atony Pyloric obstruction, calling for surgical procedure, causes a dilatation of the pars pylorica, giving the prognathian or "under-shot" appearance of a bull-dog's jaw (Fig 23) The atonic type of dilated stomach (Fig 24) is enlarged uniformly, with or without a prolapse of the pylorus But the lumen of the sphincter is not sufficiently contracted to prevent complete evacuation In such cases surgical procedure is not indicated

The atrophic contracted stomach (Fig 25) is high and the greater curvature nearly straight, the cap is absent or displaced, and the peristaltic contractions are wide, showing a lack of pliability of the gastric wall This condition is most frequently found in patients having an alcoholic history, or those showing a tendency to sclerotic changes in other organs

SUMMARY

1 The types of stomachs may be divided into four classes to facilitate indexing

2 The motor phenomena of the stomach are complex, showing a gastric cycle, consisting of a systole and diastole, and the progression toward the pylorus of peristaltic contractions

3 The appearance of the cap (first portion of the duodenum) is a vital factor in gastroduodenal diagnosis

4 The second and third portions of the duodenum may be artificially dilated

5 The lesions which can be diagnosed by serial radiography include carcinoma, hour-glass constriction, adhesions from gastric ulcer, duodenal ulcer, and gall-bladder infection, with or without calculi, dilatation from obstruction or atony, and atrophic contraction

6 The radiologist can recognize and differentiate between these conditions with about the same degree of certainty as can the surgeon at an exploratory operation without the microscopic examination of the specimen

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ABSTRACT OF DISCUSSION

Dr G E Pfahler, Philadelphia I think that it is a waste of time to attempt to classify these types, they are not definite enough for classification One shades into the other so gradually that any attempted classification means nothing We should be very careful in our endeavors to draw certain conclusions More fluoroscopic work should be done and I do not believe that we should attempt to depend on the cinematograph in drawing so many conclusions The systole and diastole of the stomach have not been shown on the fluorescent screen and I do not believe that so much confidence should be placed on what these serial photographs reveal

Dr. Lewis Gregory Cole, New York The types of stomach were simply used for classification, and have no relation to the function or pathology of that organ Diastole and systole of the stomach are shown more or less distinctly in nearly every series of stomach radiographs, and as each radiograph is an accurate representation of the lumen of the stomach at the instant it is made, there can be no doubt of its presence If I have conveyed the impression that there are two sphincters, I wish to correct it There is but one sphincter, and that separates the cap from the pyloric end of the stomach, and may be studied carefully in the radiographs If this detail is not visible on the screen, it proves that fluoroscopy is not so accurate as radiography

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Economic Importance of Mental Diseases—The amount appropriated for the care of the insane during the past year in New York was 23 per cent of the total expenditure of the state Compare this with the other fields of state expenditure education, 24 per cent , public works and conservation 13 per cent , prisons and reformatories, 4 per cent , the legislature, 4 per cent, the militia, 2 per cent , health and quarantine, 1 per cent , and care of all other wards of the state, such as the epileptic, feeble minded, blind, crippled, disabled soldiers and sailors, 8 per cent To the layman these startling figures must give some impression of a fact which some scientists and physicians deeply realize, namely that modern civilization must take hold of the problem of insanity with vigor, energy and scientific skill The hopeful thing about what appears to be on the surface a situation of despair is that insanity is not, as our forefathers used to believe it to be, an "act of God," but is a disease which can to a very large degree be prevented and to a considerable degree cured by mental and physical hygiene —*The Outlook*

FIGS 1 TO 4—TYPES OF STOMACH *

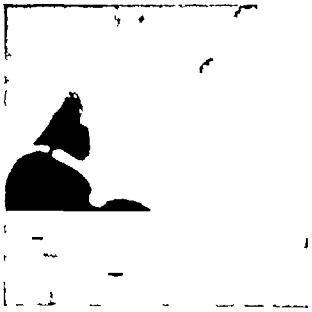


Fig 1—Cow horn

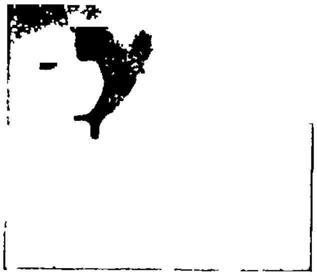


Fig 2—Text book

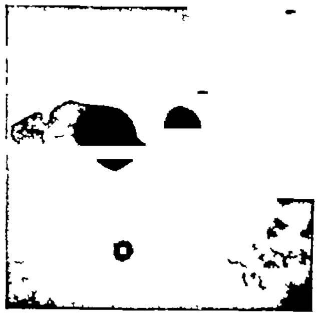


Fig 3—Drain trap

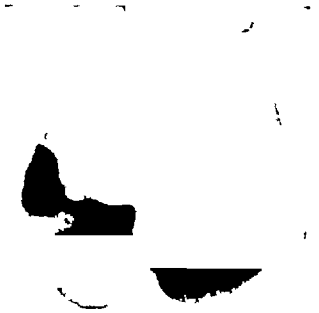


Fig 4—Fish hook

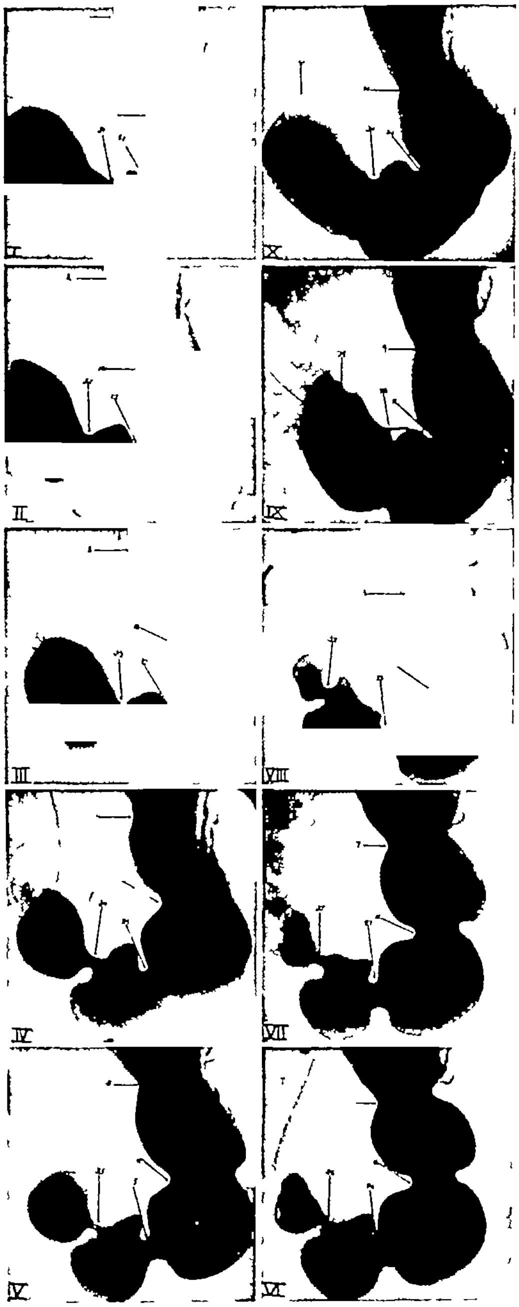


Fig 5—Serial radiographs showing diastole (Phases 7 10) and systole (Phases 1 6) and the progression toward the pylorus of a four-cycle type of gastric peristalsis

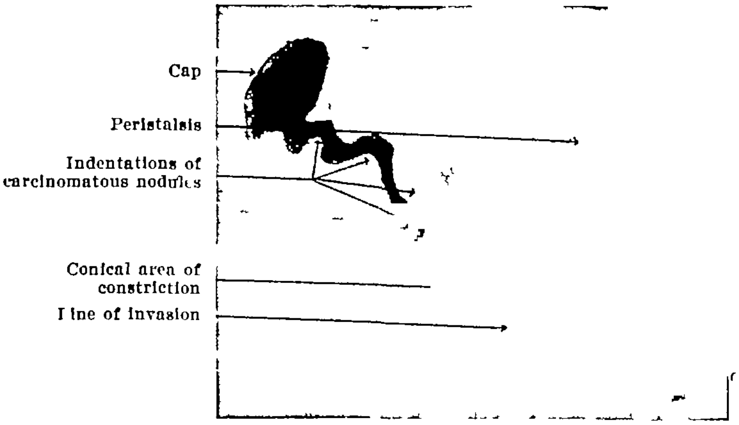

Cap
Peristalsis
Indentations of carcinomatous nodules
Conical area of constriction
Line of invasion

Fig 6—Extensive carcinoma

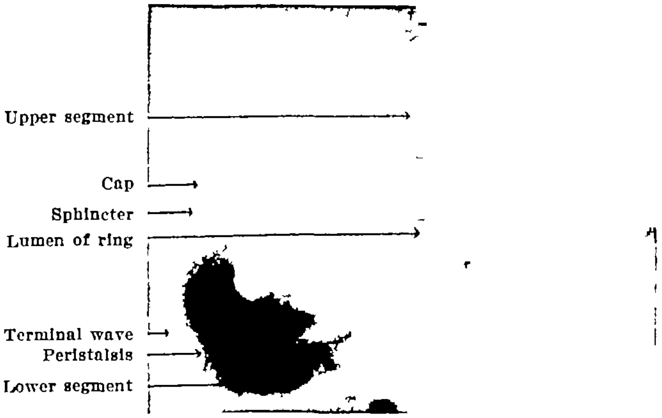
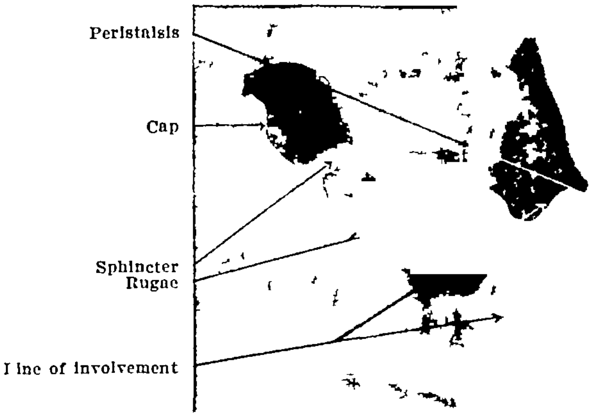


Fig 7—Hour glass stomach



* NOTE The contrast in Figures 1-6 8 9 13 19 is accentuated by a localized

FIGS 9 TO 14—VARIOUS TYPES OF CAPS

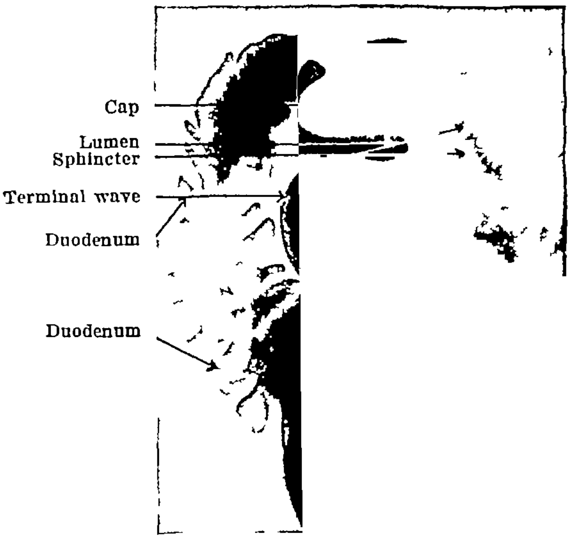


Fig 9

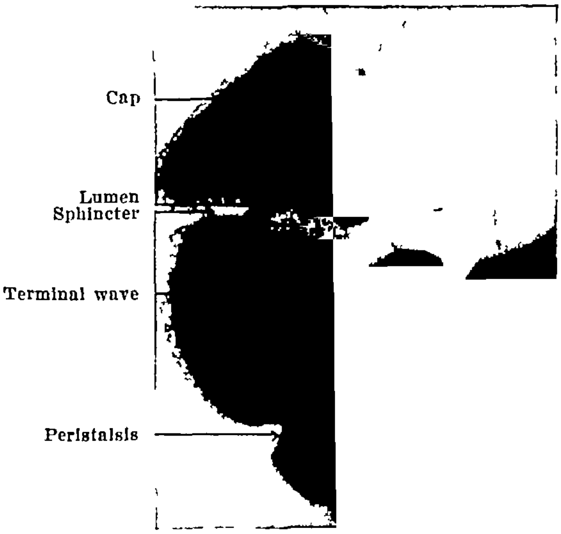


Fig 10

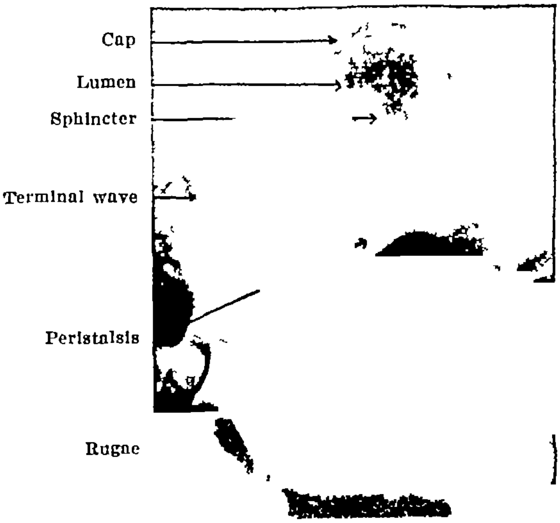


Fig 11

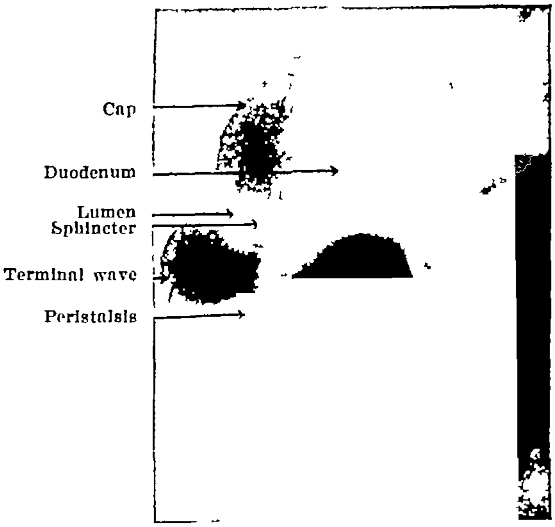


Fig 12

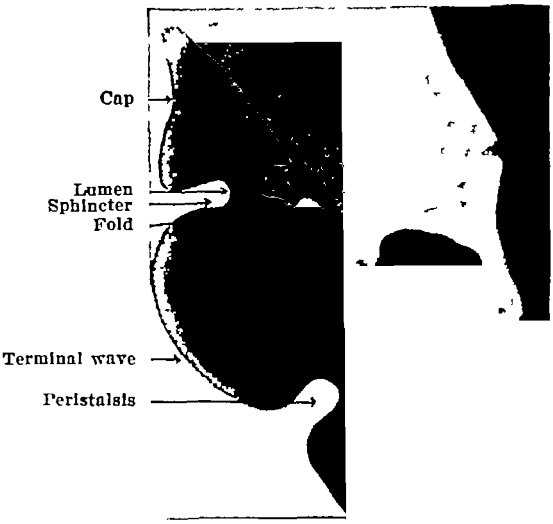


Fig 13

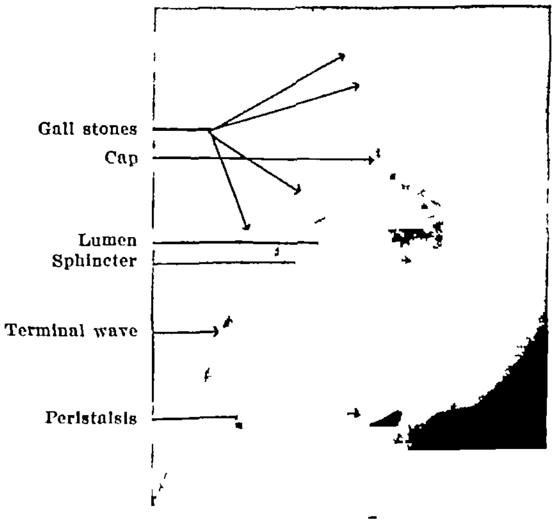


Fig 14

Figs 15 to 20—Pathologic Lesions of Pylorus and Cap

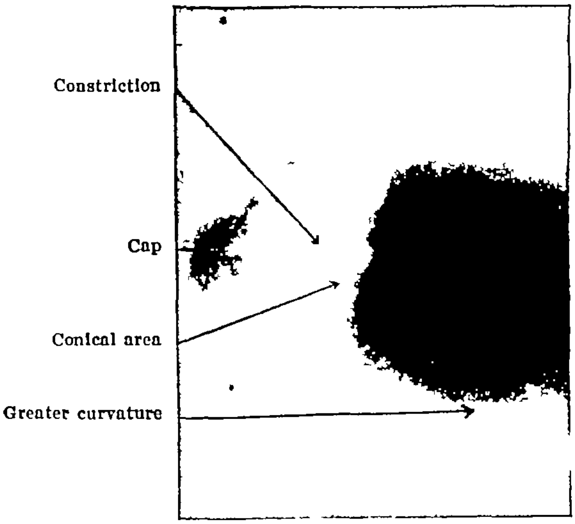


Fig 15 —Annular growths

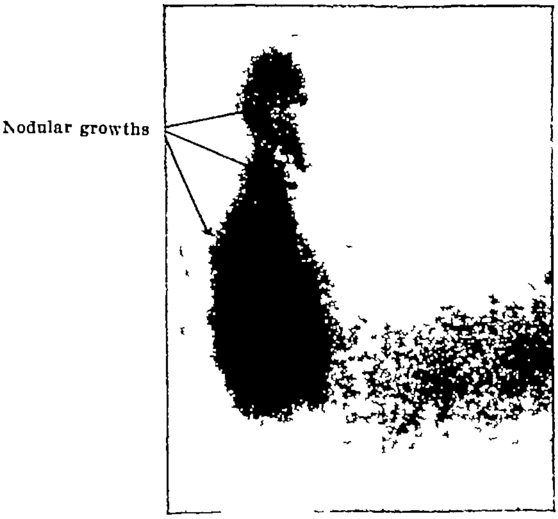


Fig 16 —Carcinoma

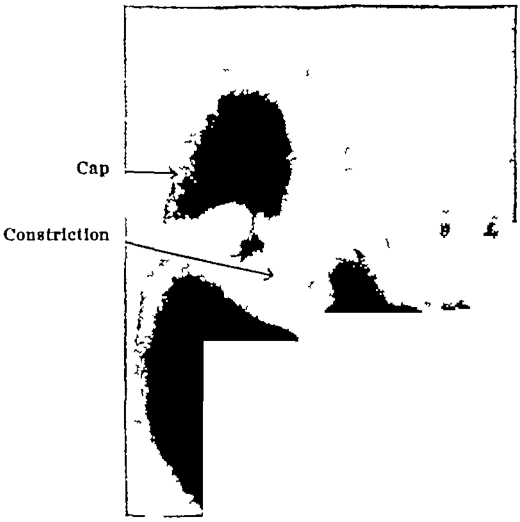


Fig 17 —Adhesions

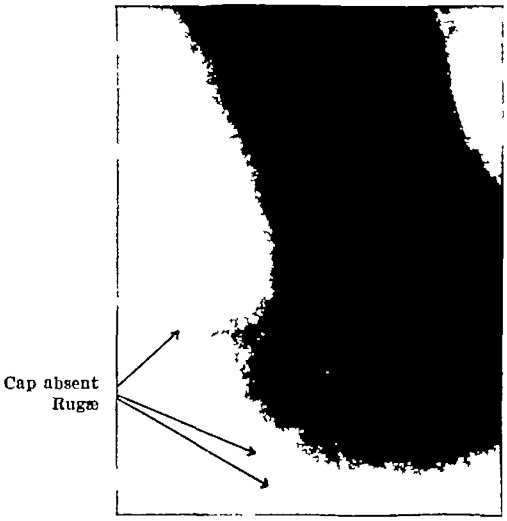


Fig 18 —Adhesions from gastric ulcer

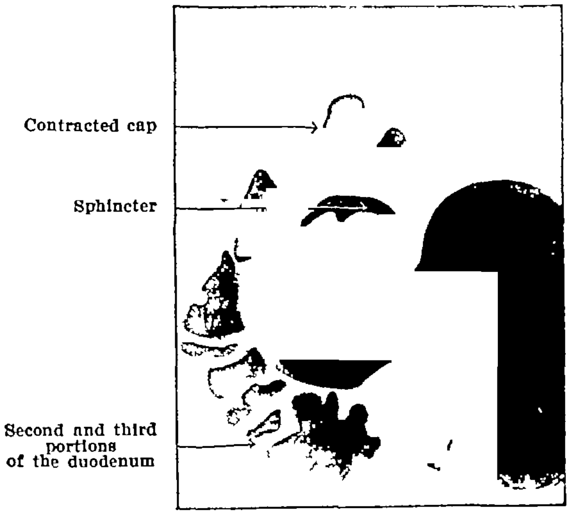
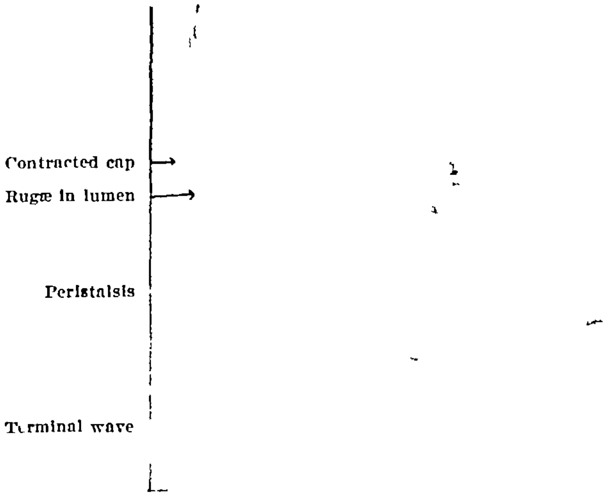


Fig 19 —Duodenal ulcer



Fig

THE ORIGIN OF TUBE-CASTS

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Tube-casts are formed in most, if not all, conditions of kidney deterioration. To a limited extent also, they occur apart from other evidences of deterioration. This fact, bearing on the diagnosis of early renal disease, warrants a close study of their origin and significance.

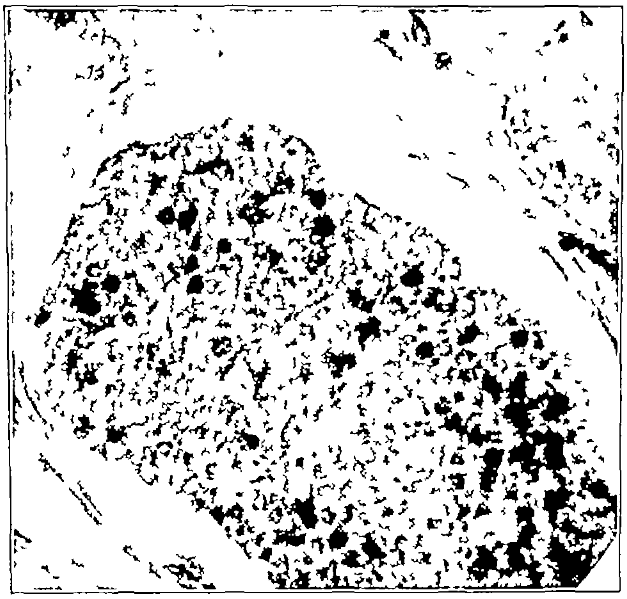

Fig. 1.—First stage waxy cast: hemorrhage into tubule with distention by blood-clot.

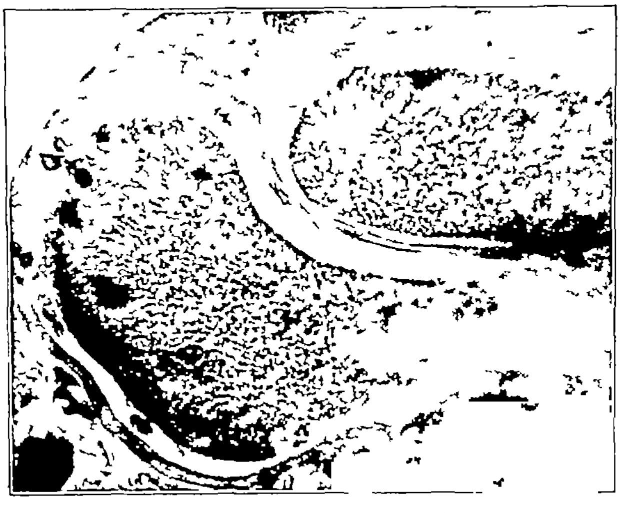

Fig. 2.—Second stage waxy cast: blood coagulum undergoes granular disintegration. Note compression of tubular epithelium.

The literature on the subject discloses many divergent views, of which even a partial review cannot be given. The objects here intended are to consider certain primary differences in casts and to account for their origin.

Tube-casts may originate from a number of the materials entering into the structure and composition of the kidney and blood, unchanged chemically and morphologically, or broken down and altered by processes of degeneration or by the action of the urinary secretion. It is evident therefore that uniformity of composition cannot be looked for. The protein units forming cellular matter are complex and subject to great variations, and so also are the products of waste and destruction. No attempt will be made to take up the chemical composition of the materials to be described, since whatever the composition, their derivation must be determined largely on morphologic grounds.

Tube-casts may be divided into three main groups: hyaline casts composed of an acid protein similar to mucin and nucleo-albumin; granular casts allied to albumin and cytoplasm; and waxy casts consisting mainly of altered blood coagulum. In addition to these materials there are fixed and wandering cells, erythrocytes, fat globules and crystals of various sorts.

The kidney has for a long time been the favorite organ for the study of granular degeneration. Present views tend to regard cell protoplasm as an emulsion of protein granules, which during degenerative processes become aggregated into more visible particles. At first the granules can be cleared with dilute acetic acid, later, however, a true coagulation takes place and they are no longer soluble. An early and a later stage are therefore distinguished.

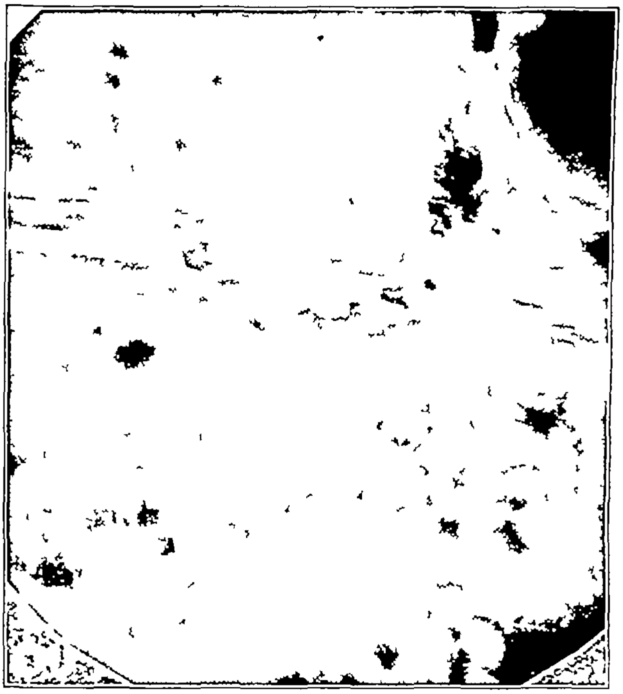

Fig. 3.—Final stage waxy cast. Cast becomes homogeneous. Vacuoles appear on surface.

The early stage can be regarded as not more than a physiologic response to stimulation,[1] and is compared to the secretion of mucous or albuminous glands. Fine granules appear along the margin of the cell bordering on the lumen, where they are dissolved or extruded, and the cell retains its integrity. The granules thus derived become more gelatinous in their descent, change in reaction and finally emerge as hyaline material. As there are other forms and sources of hyaline material,[2] reference is here made only to that found in hyaline casts. Many substances formerly regarded as having no visible structure are found in fact to be composed of fine granules, and hyaline casts likewise, when examined under high amplification in a suitable light, exhibit many transparent particles.

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[1] Wells: Chemical Pathology.
[2] Hammersten and Mandel: Physiological Chemistry.

The late stage of parenchymatous degeneration terminates in destruction of cell nucleus and protoplasm. The necrotic mass descends, forming granular casts, or also is transformed into hyaline material,[3] the essential factors being clearing of the granules and change to an acid reaction.

Hyaline casts therefore can be produced through both early and advanced cell changes, but to these sources must be added the probable origin of hyaline material from albuminous serum exuded by the glomerulus, and transformed in the tubules by certain acid principles in the urine, the change being only physical, or both physical and chemical. The assumption is made that hyaline casts are not usually associated with destruction of the parenchyma. This is taken from the fact that hyaline material is found in normal urine in other forms than casts, being commonly, though incorrectly, termed mucus.

HYALINE CASTS AND ALLIED BODIES

Mucus, so called, the basis of hyaline casts is a normal constituent of urine. The amount of mucus is increased in urine of high specific gravity, in urine of high acidity, in venous congestion, in toxemias from infectious diseases, digestive disturbances and irritant poisons, in some forms of nephritis, in cystitis, pyelitis and irritative and inflammatory conditions of the genital organs. Not all the mucus or mucoid substance found in urine comes from the kidney. Mucus derived from the kidney is seen in long strings ranging from threads of extreme fineness to broader bands and ribbons, often there are branched filaments or numbers of agglutinated threads arranged longitudinally, spirally or otherwise. The term "cylindroid" has been applied to the broader cast-like formations, differing from casts only in compactness, and in not entirely having filled the tubules in which they were molded.

The material forming hyaline casts seems to be identical with that in mucous threads,[4] and casts are very commonly seen pinched off at one or both ends into a fine thread. Casts are produced by a retention of the hyaline material in a tubule which often becomes dilated, and therefore the width of the cast does not indicate the part of the kidney from which it comes. The tubules of the kidney are subject to sharp changes in direction and at such places are more prone to obstruction. The tubule behind the obstruction dilates until sufficient pressure is established to force the cast through. Hyaline casts are usually molded in the limbs of the loop of Henle, where the material in a fine stream entering a tubule of wider caliber often coils itself spirally. Many hyaline casts are formed spirally, the structure showing itself as an occasional notch in the side of the cast, and such casts are sometimes termed convoluted, implying formation in the convoluted tubules which is not the case. Mucus maintains its viscous colloid state only in solutions of sufficient concentration and acidity, dissolving in pure water and in alkalies. Hence urine of low specific gravity and alkaline urine contain little formed mucus.

GRANULAR CASTS

Parenchymatous degeneration attacks the cells of the convoluted tubules with great intensity, where the granular and necrotic material accumulates in the lumen until discharged. Granular casts as seen in urine usually have a basis of hyaline material in which the granules appear as scattered points, or again the whole cast is composed of granules. Granular matter takes the protoplasmic stains, with special affinity for fuchsin.

Granular casts may also be of exudative origin and as such cannot be distinguished from the degenerative kind. They are found in large number in the exudative forms of nephritis. Granular exudation is seen typically in the capsular space.

A third form of cast arises from granular disintegration of blood coagulum, as will be described under waxy casts. These casts are composed of dark, deeply staining granules not likely to be distinguished from dense degenerative or exudative granules.

Fatty globules when found in casts often accompany epithelial cells or their fragments. They are regarded either as an infiltration or a degeneration, in the latter case belonging to the lipoids.[5]

WAXY CASTS

The typical waxy cast is an altered blood coagulum, the result of hemorrhage into a tubule. Hemorrhage may come either from the glomerulus or directly through the injured wall of the tubule. The blood fills the tubule, occludes its distal end and often greatly distends its walls, until the epithelium shows as low flat compressed cells. The clot entirely fills the lumen of the tubule, when seen in kidney sections, however, the cast has contracted owing to the action of dehydrating agents and appears to lie loosely in the tubule.

First are seen the red corpuscles in their usual form, next they undergo granular disintegration and finally fuse into a solid cast. Sometimes the leukocytes are seen drawn together into a clump.

Waxy casts appearing in the urine are generally not of great length, are tortuous or of the corkscrew variety, and are true molds of the convoluted tubules, differing in this respect from spiral hyaline casts. Occasionally waxy casts are long and straight. Possibly there are instances in which waxy casts are formed by the fusion of granular epithelial matter.

The production of waxy material from blood likewise takes place in the capsular space where it is seen lying in half-moon shape, or even involving the glomerulus when there is hemorrhagic destruction of the tuft. Waxy casts do not denote amyloid disease of the kidney.

Red cells leaving the tuft in small numbers become swollen in the capsular space, exhibiting a few scattered granule-like points, and enter the convoluted tubules where they disintegrate. This condition is sometimes seen when the glomerulus shows no other change.

As far as this work has gone, I am led to believe that tube-casts of all kinds except epithelial and fatty, more frequently come from the protein elements of the blood, through temporary or permanent insufficiency of the glomerulus, than from the tubular epithelium. Leaking of the tuft during periods of hyperemia does not imply serious injury to the thin-walled capillaries. Occasional traces of albumin in the urine are not incompatible with good health.

The chief varieties of casts having been outlined it needs only to be briefly stated that frequent combinations are entered into with epithelial cells, leukocytes and red cells.

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[3] Smith, R. W.: The Origin of Urinary Casts, Boston Med. and Surg. Jour., May 9, 1908.

[4] Coplin, W. M. L.: Microchemical Reactions of Tube-Casts, Philadelphia Med. Jour., March 8, 1902.

[5] Oertel: The Anatomic Histologic Processes of Bright's Disease.

The diagnostic value of polynuclear leukocytes is often exaggerated Scarcely an average urine can be examined without finding definite numbers of free leukocytes, and increased numbers occur from only the mildest irritations of any part of the genito-urinary tract Little reliance can be placed on leukocytes in the diagnosis of nephritis unless they are incorporated in casts, or else are obtained by catheterization of the ureter

Mononuclear cells of slightly larger diameter are more likely to come from the kidney, it is not safe to term them "epithelial cells," however, because they are usually wandering cells which occur in large numbers in nephritis[6] These cells often have dense deeply staining protoplasm, and can be found coming from glomeruli undergoing destruction, which no doubt is only one of a number of sources By some they are held to be phagocytic

The process of nephritis probably involves all the structures of the kidney, in no case affecting either the parenchyma or the interstitial tissue alone, however great variations occur in the intensity and duration of the process, and these factors are responsible largely for the different types The regenerative power of the kidney is great Restoration follows nephritis of considerable intensity from acute infections, even in more advanced cases there is marked and prolonged power of the kidney to adapt itself to conditions

In estimating the value of casts, we should bear in mind that the kidney is subject to normal wear and that periods of exaggerated waste of kidney tissue may exist at times without exceeding the limits of repair, also that as age advances slight kidney changes are more apt to occur, these often being focal, or involving only small parts of tissue, such as in the senile and arteriosclerotic kidneys

Tube-casts give no reliable information as to the functionating power of kidney It is natural to infer that their presence in the tubules is a hindrance to free excretion, though to what extent this may be the case is yet to be determined On this point more can be learned by careful continued observation on the excretion of water, chlorids and urea, and on the phenolsulphonephthalein output which has been estimated by me in series of cases attesting to its usefulness as claimed by the originators[7]

PRESENT STANDING OF THE OPERATION OF LITHOLAPAXY *

ARTHUR T CABOT, A.M., M D

BOSTON

To our knowledge of the very perfect operation of litholapaxy I can contribute nothing important Indeed, I can add but little to what I said about it in 1899 before the Section on Surgery and Anatomy of the American Medical Association[1] at Newport

At that time I stated my opinion that litholapaxy was the operation of choice for the removal of most stones in the bladder After a much enlarged experience I wish to express the belief that litholopaxy is the operation of choice in all uncomplicated cases of stone and having seen this opinion constantly supported and confirmed by such masters of genito-urinary surgery as M Guyon, Freyer, Keyes, Keegan, Chismore and others, it has been a source of surprise to me to find the operation imperfectly understood and little practiced among the younger generation of surgeons

So great has seemed to me the indifference toward this operation even among some of the men who are devoting themselves to the special work of genito-urinary surgery that I am glad of this opportunity to endeavor to bring about a better and more intelligent opinion of this safe and satisfactory operative procedure

Why do surgeons pass by this operation (litholapaxy) having a mortality of from 1 6 to 6 per cent, according to the age of the patient, and resort to one (suprapubic lithotomy) having a mortality of from 10 to 20 per cent ? It is not because the more dangerous operation has a shorter and easier convalescence, for after suprapubic lithotomy convalescence is more painful and from four to ten times as long as after litholapaxy Again, litholapaxy interferes less with the functions of the bladder, and in my experience of 219 cases of stone removal there has been more tendency to recurrence after suprapubic cystotomy than after litholapaxy

The advocate of suprapubic lithotomy will say that when the bladder is opened, unsuspected conditions are sometimes found which require the suprapubic opening for their proper treatment In the early — what I may call the blind — days of bladder surgery, this had a certain amount of truth and justification in it, but at this time when the cystoscope gives the operator ample opportunity to become acquainted with the interior of the bladder before deciding on the operative procedure, it is no longer justifiable to subject all patients with uncomplicated stone to a more serious and dangerous operation in order to avoid occasionally overlooking some complication

There is, then, no good reason to be advanced in favor of the suprapubic operation in uncomplicated cases, and yet many men continue to practice it and subject their patients to needless risks and discomforts This is so, in my opinion, because many surgeons are not provided with the necessary instruments, and they have never taken the trouble to inform themselves and to be instructed in the technic of the crushing operation

A litholapaxy outfit, while not very expensive, is a considerable addition to a surgeon's armamentarium, and may seem a serious burden to a general surgeon who sees comparatively few cases of stone When patients with stone go to surgeons not equipped for litholapaxy, the question may be asked how these surgeons meet the situation

They know that even after suprapubic incision the mortality is not very high and they wish to operate themselves rather than turn the case over to a rival, expert in lithotrity They do not make a close enough analysis of the situation fully to realize that by this course they are subjecting their stone patients to a mortality risk fully 10 per cent higher than is justifiable From their point of view their position is strengthened and justified by the belief that there is unusual danger attaching to litholapaxy to be overcome only by unusual skill

This idea of unusual difficulties surrounding litholapaxy is wholly exaggerated and only to be accounted for by lack of familiarity with the operation and its results As a matter of fact, the skill required in the use of the lithotrite is no greater than that needed in an ordinary cystoscopy, and no surgeon is competent to undertake bladder surgery who is not competent to use a cystoscope. Inexperience adds no more to the danger of litholapaxy than it does to the danger of suprapubic cystotomy. Furthermore, my opportunities for seeing young surgeons undertaking their early litholapaxies have convinced me that a litholapaxy in inexperienced hands is less dangerous to life than a suprapubic cystotomy in the hands of an experienced general surgeon, because the intrinsic dangers of the operation are much less.

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[6] Cabot Clinical Examination of the Urine THE JOURNAL A M A March 18 1905 p 837

[7] Rowntree and Geraghty Am Jour of Pharm and Exper Therap July 10 1911

* Dr Cabot died Nov 4 1912

* Read in the Symposium on Treatment of Vesical Calculus in the Section on Genito-Urinary Diseases of the American Medical Association at the Sixty-Third Annual Session held at Atlantic City June 1912

[1] Cabot Arthur T The Choice of Operation for Stone in the Bladder THE JOURNAL A M A Nov 9 1899 p 657

The fear felt by inexperienced surgeons for the lithotrite is therefore unfounded. A brief study of any of the more detailed descriptions of the operation will fit a man with any training in urethral manipulations to perform the crushing operation safely. The instruments are simple and any one who uses urethral instruments with gentleness and care can readily manage them.

This is no time or place to discuss at length the fine technical points of the crushing operation. The one thing of importance is that the bladder be moderately distended before the lithotrite is introduced. If this is done it is practically impossible for the bladder wall to be caught between the jaws. The fear of this accident seems wide-spread and yet I never knew of any damage being caused in this way.

Formerly, before the modern treatment of prostatic hypertrophy was developed, it was a common thing in my practice to crush stones behind greatly enlarged prostates. The operation was often carried out in a distorted bladder and the instruments were manipulated through a stiff and tortuous urethra. I have notes of 185 cases in which a formal litholapaxy was done under general anesthesia and I have not included a large number of cases in which small stones or calcareous gravel were pumped out with or without local anesthesia. Notwithstanding the unfavorable conditions under which many of the earlier operations were performed only eight patients died, a mortality of 4.32 per cent.

To understand fully the degree of responsibility of the operation for this mortality it is well to glance a moment at the fatal cases.

Case 1.—A woman of 62 with extensive tuberculosis of the glands died one month after a combined litholapaxy and curettage of the cervical glands. The bladder had fully recovered. Death resulted from general cachexia.

Case 2.—A man of 84 died one month after litholapaxy of sudden pulmonary embolism.

Case 3.—A man of 69, feeble and with a chronic bronchitis, underwent an easy operation. The urine was clear and bladder irritation disappeared the first week. On the tenth day the patient died of pneumonia.

Case 4.—A man of 70, with complete obstruction in prostate and suppression of urine, was operated on in the country as a desperate effort. The kidneys never resumed work, and death ensued in twenty four hours.

Case 5.—A broken down man of 60 with chronic bronchitis and a weak heart had bladder tenesmus. On account of the patient's wretched general condition he was kept under treatment for almost two months. Pain prevented improvement. A quick litholapaxy was finally done as a desperate measure to give him relief. Difficulty of respiration was greatly increased, and death followed three days later.

Case 6.—The patient was a man of 70 who had suffered with symptoms of stone for fifteen years. After litholapaxy there was good recovery from bladder symptoms. Then hematuria set in and in my absence another surgeon opened the bladder but found nothing. After death the kidneys were found full of stones.

Case 7.—A man of about 70 was operated on at a hospital in a neighboring city. A catheter was fastened in after the operation, as it was a prostatic case. I had no notice that things were not going well until I accidentally heard of the patient's death.

Case 8.—A man of 70 underwent an easy operation, but he died and autopsy showed hydronephrosis and pyelonephritis.

Of these eight deaths then, two occurred a month after operation as a result of conditions not connected with the litholapaxy. Two other deaths were caused by pneumonia consequent on the anesthetic in patients with chronic bronchitis, and one patient was in a desperate condition from acute suppression of urine. In view of these facts I think it will be conceded that even the low mortality of 4.3 per cent. was not wholly to be laid at the door of the operation. Among uncomplicated cases of stone there were no deaths.

Modern surgery rightly demands that in cases of prostatic obstruction with secondary stone, treatment shall be given for the obstruction and that the removal of the stone shall be merely an incident in the operation for removal of the prostate. Whether the surgeon elects the perineal route or the suprapubic for the removal of the prostate, the stone is easily removed by either without added danger.

This change in the method of treating secondary stones behind enlarged prostates has taken from the accepted domain of litholapaxy most of the cases of real difficulty in manipulation, the cases among which the slender mortality occurred, and for the crushing operation are left the uncomplicated cases which have practically no mortality and those occasional prostatic patients who shrink from the added risk of a prostatectomy and find themselves comfortable when the stone is removed.

Since Dr. Bigelow published to the world the operation which he named litholapaxy there have been few changes in the technic. Dr. Chismore's evacuating lithotrite is perhaps the most considerable and important innovation which has been brought forward. In the hands of its distinguished inventor the evacuating lithotrite did extraordinarily good work. Dr. Chismore operated usually without general anesthesia and was content to do an operation in several sittings when that was necessary. With a conscious patient the evacuating lithotrite had the distinct advantage that the suction of the pump drew the fragments between the jaws. The lithotrite therefore did not have to be moved about in search of fragments and the operation was consequently less painful.

In my experience with Dr. Chismore's instrument the small size of the evacuating tube has been a decided disadvantage and I have come to use the instrument only occasionally, when the search after a last elusive fragment has been troublesome. The combination of a cystoscope with an evacuating lithotrite is a last refinement devised by Dr. George Walker to facilitate the search for a last fragment.

It must be difficult at the end of a crushing operation to obtain a clear medium in which satisfactory cystoscopic manipulations can be carried out. In all of my series of cases I never had more than a momentary difficulty in seizing the last fragment, this difficulty was met only in sacculated bladders behind enlarged prostates — in cases which are not now selected for litholapaxy.

In this article I have endeavored to indicate the change in the status of the operation of litholapaxy that has come about since my former paper in 1889. We have seen that modern prostatectomy has taught a better way of disposing of the troublesome class of cases that furnished most of the difficulties met by the early lithotritists Having emphasized this additional exception in which a cutting operation should be preferred to litholapaxy, I shall close by repeating the assertion made in that earlier paper

> In my opinion, we have in litholapaxy the operation of choice for the removal of most stones While this is the rule, there are exceptions to it, and the varying conditions surrounding stone in the bladder will now and then lead us to choose some other operation for their safest removal
>
> The surgeon who best appreciates these varying conditions, and selects in each case the operation which most surely avoids the dangers surrounding "that particular patient," will arrive at better results than any advocate of a special operation, however expert

1 Marlboro Street

SUPRAPUBIC CYSTOTOMY FOR VESICAL CALCULUS

INDICATIONS AND OPERATIVE PROCEDURE *

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There are but two operative methods now considered practical for the treatment of stone in the urinary bladder One is the crushing of the stone and the removal of the fragments through the urethra, the other is the opening of the bladder suprapubically and the removal of the stone through the incision.

He would be obdurate indeed who did not acknowledge the wonderful invention of the lithotrite and the achievements accomplished by its inventor At a time when any cutting operation carried with it such a high mortality and the convalescence was so prolonged in those who survived, the lithotrite, with the skilful touch of Bigelow, was truly a blessing, but the conditions that prevailed then with regard to the cutting operation no longer exist to-day Little advancement, if any, has been made for the crushing operation, while each year brings a better record for the suprapubic operation

To say that either operation should be used to the exclusion of the other for all cases of stone in the bladder would be ill-advised, but the cases generally recommended for the use of the lithotrite by the advocates of litholapaxy are, as a rule, selected cases and naturally would have a lower mortality-rate, no matter what kind of operation Surgery is rapidly turning from the dark to the light, and blind operations or those depending entirely on the sensation of indirect touch must be replaced, wherever possible, by operations conducted by inspection of the field or by the direct aid of the fingers We all know that it is possible by large experience to become fairly accurate by indirect palpation, but it can never be so nearly exact a method as that which depends on seeing or direct feeling

The opportunities for any one person in this country to acquire a large experience with the lithotrite within any reasonable time are very limited, material in clinics is not sufficient to give the student the practical experience necessary to do a successful litholapaxy, and certainly no one would recommend its use by the untrained, while the opportunities for teaching suprapubic opening of the bladder are quite common, there being many other conditions besides stone for teaching this technic In India where so large a proportion of natives have vesical calculi, an extensive experience may be acquired in a comparatively short time, as most statistics for the lithotrite come from India, the comparison is hardly fair

Most advocates of litholapaxy admit that the stone should be freely movable, that there should be sufficient bladder capacity, and that the urethra should be of sufficient size, also that a very large prostate, an encysted stone or a stone with a foreign body as a nucleus are all contra-indications to the successful use of the lithotrite For these more or less difficult cases suprapubic cystotomy is recommended If, then, the mortality-rate should be somewhat higher for the cutting operation would the comparison be fair?

Among the causes mentioned as being responsible for deaths in suprapubic operations is peritonitis This should no longer occur, for with better aseptic methods and better technic the dangers of peritonitis are reduced to a minimum Better local and general anesthetics have reduced the danger of shock from the operation, and better methods of dealing with the wound have shortened the period of convalescence and reduced the complications to a minimum

The complications and mishaps of the lithotrite, when they do occur, are nearly always serious I am treating now a most persistent stricture resulting from the use of the lithotrite by a colleague In this case there had been an extensive laceration of the urethra

INDICATIONS FOR SUPRAPUBIC CYSTOTOMY

Overenthusiastic exponents of litholapaxy may make the statement that they have never seen a stone too large or too hard to be grasped by the lithotrite, but their experience is scarcely borne out by the experience of other surgeons or by the many reported cases in medical literature Even in the special stone number of the *Indian Medical Gazette* expert operators confess that this condition does exist The case reported by Richards[12] is a good illustration The stone weighed 2 pounds, lithotrity failed, perineal incision failed because the stone had to be chiseled, and the stone was finally removed suprapubically, the wound healing readily In my own practice there have been eight cases with large hard stones which I feel could not have been removed without great difficulty by any other than the suprapubic route The patients made quick recoveries without complications

The operative treatment of encysted or adherent calculi is always the high incision, as the many published cases prove Inspection is absolutely necessary here I have had three such cases, in one a stone about 2 cm in diameter was enucleated from a pocket in the region of the trigonum, only the very tip showing In another the stone was firmly adherent behind the prostate In the third case cystoscopy showed a calculus embedded in the mucous membrane over the right half of the trigonum This case is of further interest in that the patient returned in six months complaining of the old trouble, cystoscopy showed the diverticulum at the site of the former stone Again suprapubic incision was made, several soft stony deposits removed and the diverticulum dilated, since which time the patient has been in good health

Where multiple stones are present the superiority of the suprapubic method is hardly to be doubted, for exposure of the operative field is necessary for a thorough search. In my practice I have had ten cases of multiple calculi, in one of which I removed ninety-three stones, six the size of filberts and eighty-seven ranging down to the size of a grain of wheat, there was extensive trabeculation This patient was 84 and made an uninterrupted recovery

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* Read in the Symposium on Treatment of Vesical Calculus in the Section on Genito-Urinary Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

* This article is abbreviated in THE JOURNAL. The complete article appears in the Transactions of the Section and in the author s reprints.

[12] Richards Lancet London, 1908 ii 230

The suprapubic operation is generally accepted as the operation of choice in the young The operations of Milton[7] and Assendelft[9] are good proof of the wisdom of this Even Thompson did not advise litholapaxy in children My youngest patient was a 19-month-old baby There was a quick convalescence

The presence of calculi in old men is another indication for the suprapubic incision Thomas,[13] in an article on calculus in old men, gives the histories of four cases in which the calculi were so situated behind the prostate that the lithotrite could not grasp them The stones were removed suprapubically and the patients made good recoveries My seven patients, all over 70, left nothing to be desired so far as operative recovery was concerned

Except in the hands of the most experienced, prostatic hypertrophy offers obstruction to the lithotrite, there being few surgeons who will not prefer the suprapubic method Six of my patients had marked prostatic hypertrophy, on three of whom I performed a prostatectomy at the same time

The location of the calculus projecting from the vesical end of the ureter is another indication for the suprapubic method I have had several very interesting cases of this kind, also two cases in which the stone was wedged in the neck of the bladder and considerable force was necessary to dislodge it It could hardly have been removed in any other way

The presence of a foreign body as a nucleus is another hindrance to crushing Many such cases are on record My cases of this kind are three in number, the nucleus being a hair-pin in one case, the wick of a taper about 3 inches long in another, and a piece of wax in the third Calculi associated with tumor also hinder crushing and a strictured urethra almost necessitates the cutting operation

A recent case in my practice was of more than general interest The patient, a man aged 67, suffering from severe ascites and marked myocarditis, was in almost continuous pain, due to a bladder contracted firmly about a very rough stone There was practically no bladder capacity Five liters of cloudy serum were drawn from the abdominal cavity the day before the operation Under nitrous oxid and local anesthesia, a large calculus was successfully removed suprapubically

The reports of Lakeside Hospital, Cleveland, for the ten years from 1900 to 1910 show forty-six operations for vesical calculi, thirty-eight were done suprapubically, seven were litholapaxies and one was removal of the stone by dilatation of the urethra Four deaths occurred in the suprapubic cases, all four being complicated cases One man of 68 had acute double hydronephrosis, another of 74, with a very weak heart, had a prostatectomy at the same time, the third had marked prostatic hypertrophy and the bladder was divided into two compartments by a small band, the fourth patient, a man of 55, showed a gelatinous condition of the bladder mucosa, the bleeding being a constant oozing The mortality of the suprapubic operations was 10 5 per cent One death occurred in the litholapaxies, that of a boy of 12 who died from severe laceration of the bladder The mortality of the litholapaxies was 14 28 per cent

One of the objections to suprapubic cystotomy is the prolonged convalescence This was a valid objection when the bladder was drained, but it is no longer necessary to drain the bladder after removal of stone or tumors If the bladder is properly closed, a week or ten days is all the time necessary for a complete cure I have been closing the bladder in practically all suprapubic operations, with the exception of suprapubic prostatectomy, and have more than 90 per cent of primary unions

For the success of this operation certain points in the technic, which I have described in a previous paper, are necessary In brief they are as follows The cut edges of the bladder should not be grasped with crushing forceps The edges must be carefully approximated while the wound is on the stretch so that the stitches will not be separated when the bladder is distended with urine The ligature must be absorbable My personal experience consists of fifty-three suprapubic operations for stone in forty-nine cases, with no deaths There were four cases of recurrence Good recoveries resulted in all cases Two of the forty-nine patients were women Three patients were below 15 years of age, sixteen between 15 and 50, twenty-nine between 50 and 84 The youngest patient was 19 months, the oldest, 84 years The average age was 53 4 years In thirty-three cases the bladder was immediately closed, leakage occurring in only three cases and in two of these only a small amount, and for a short time

Until a practical observing lithotrite is invented, which will give the operator the opportunity of seeing the field of operation, suprapubic cystotomy for stone must remain the method of choice by the majority of operators

1021 Prospect Avenue

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS CABOT AND LOWER

Dr John Myers Swan, Canton, China In the Canton Hospital of South China, during the last twenty years I have had 1 058 lithotomy operations for urinary calculi, 950 of which were by the old lateral perineal section and about fifty by the suprapubic In addition to that and during my earlier experience in the treatment of this disease, I had to deal with about 258 by litholapaxy There are two or three factors that have caused us to adopt the operation we have generally done first, the age of the patient Out of 1,058, 330 were under 10 years of age, and we all know that it is not nearly so easy to use a lithotrite in patients under 10 years of age as it is in the adult The factor that first influenced me with regard to the operation best to do was the mortality rate My predecessor, Dr John G Curry, was one of the most famous lithotritists in his time, and we have in the hospital one of the best outfits for lithotrity In the first few years of my experience the mortality rate ranged higher in the operations for litholapaxy than in the ordinary lithotomy The second and perhaps the most important factor was that there was recurrence after litholapaxy Dr John G Curry was a skilled lithotritist, and yet I have found that anywhere from six months to a year and a half after litholapaxy our patients returned with recurrent stone Recurrence very rarely occurs after lithotomy Third, when we have from ten to twenty operations in one day, the question of time must be considered From two to five minutes from the time the patient is anesthetized until he is ready to be removed from the table will generally allow of a lithotomy Lithotrity cannot be done in that time. The advantage to the patient, the liability to return after litholapaxy, and the quickness, ease, convenience and safety of the operation, have influenced us to adopt lithotomy, either suprapubic for the larger stones, or the ordinary lateral perineal for the smaller ones Exclusive of serious organic disease, aside from kidney or bladder, our mortality rate after lithotomy, either suprapubic or perineal, has been reduced to 3 per cent, and in one single year I did sixty two perineal and suprapubic sections with no mortality

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[13] Thomas Lancet London 1900 1 1652.

Dr A. L. Chute, Boston I do not know whether you are all aware that Dr Cabot was the pupil and great friend of Dr Bigelow, our surgical primate of Boston, who, we think, did so much in establishing this operation In spite of the statistics from Canton, I do not see how anybody can hold to the cutting operations It seems to me that the operation of litholapaxy is so much easier In uncomplicated cases it does not seem to me that we ought to consider the suprapubic operation from the point of view of the patient I disagree with Dr Swan as regards the time That is not an argument It is the surgeon's time as compared with the patient's convalescence

Dr Hugh H. Young, Baltimore I hesitate to say anything when there is a man present who has done 1,058 stone operations, an appalling experience to the rest of us I agree with Dr Cabot and Dr Chute in the thought that it does seem a shame in this day of the cystoscope to do a cutting operation for stone in the bladder in uncomplicated cases, when it is so easy to crush this foreign body Of course there are reports of a few cases of rectal fistula and a certain number of cases of incontinence in which the lateral perineal operation has been employed, so that the English surgeons in India have practically given up either the median or the lateral lithotomy We have all seen severe suprapubic infections, and occasionally extravasation One of my patients died from interrectus infection following the removal of a calculus The fact that these complications are not possible after the litholapaxy operation ought to lead us to try wherever possible a crushing operation Litholapaxy has fallen into disfavor on account of the length of time consumed, and on account of the difficulty in finding the last fragment which often remains and leads to the recurrence of stone

Chismore was right in trying to perfect the operation by changing the instrument so that the stones could be sucked into the blades, caught there and crushed without hunting all over the bladder for them Those of you, however, who have tried Chismore's instrument know of the difficulties It was mechanically not a well constructed instrument One could not handle it so quickly and easily as the Bigelow The evacuating tube was so small that it was impossible to get anything except the small fragments through it, although I think that the evacuating principle was a good one Therefore, I constructed a lithotrite, fashioned after Bigelow's principle, with the handle hollow, a stop cock and an evacuator attached to the instrument, thus making it possible to have an assistant work the evacuator while the surgeon is crushing Then, if desired, it is easy to introduce a straight cystoscope through the instrument, hunt for any fragment, pick it up and crush it There are certain difficulties in the perfection of this instrument which have made me hesitate to put it on the market The difficulty is in the balancing of the metals, to have the blade large enough and strong enough, whether the old Bigelow blade or a fenestrated posterior blade is used Freyer and Keegan have shown that pushing of fragments through the fenestra does no harm A fenestrated posterior blade makes a more effective crushing instrument than Bigelow's blade So my instrument which is made after the principle by Leiter has the fenestrated blade It seems to me that the great trouble with the lithotrite is the introduction of one instrument after another and the hemorrhage that results from the passing of the instruments through the posterior urethra With an instrument introduced only once there is practically no bleeding, so that cystoscopy is really quite practicable

Dr Louis E. Schmidt, Chicago I should like to draw attention to the phrase, 'enlarged prostate complicated with stone" which seems to be a general term I am quite sure however, that if we use the cystoscope, we can often readily see that we are dealing with a primary stone, and that the prostate has absolutely nothing to do with the condition In the past three years I have crushed stones in three patients over 65 years of age All had been advised to have a prostatectomy and naturally removal of the stone In all three instances litholapaxy has given perfect results I think that it is well worth taking into consideration that it is the stone that is causing the trouble and not the prostate, and that we must not always think that the prostate has to be removed with the stone

Dr Eugene Fuller, New York I have always felt that there was a very large and useful field for litholapaxy There is no doubt that it is an operation which requires great dependence on the sense of touch, and if a surgeon has that accomplishment, he will find in many cases that it will be the simplest thing in the world to crush a stone and to remove it, by so doing he will subject his patient to less danger and pain than by cutting There are cases in which stone is only secondary to some other condition, and of course, one does not want to try to crush I think that is the case in a great many conditions of the prostate, not all of them, as Dr Schmidt has just pointed out For instance, if a phosphatic stone is secondary to foul urine in the postprostatic culdesac, there is little use in trying to crush that stone and leave the foul urine It is better to remove both the prostate and the stone If there is a hard stone and a clean bladder in a condition of prostatic retention, then it may be worth while to crush the stone One curious point that is brought up sometimes is the tolerance to stone One sees a certain class of cases in old men who have an extreme amount of tolerance, in such cases, for instance, there exists a mulberry calculus of the roughest kind with perfectly clear urine and no pain. The only way I can explain that condition is that these men have so much prostatic obstruction that the stone during urination lies in the culdesac and consequently is not brought into the grip of the neck of the bladder at the end of the act I have never seen a young man who harbored a stone like that without a great deal of pain in the bladder

Dr George S Whiteside, Portland, Ore I have just seen the large collection of stones from the Canton Hospital here on exhibit They are a most wonderful collection and some of them could not have been crushed Some are as big as paving stones Conditions are a little bit different in this country from those in Canton, and it seems to me that we see the smaller stones Educated people, when they have anything the matter with them, go to see a physician instead of waiting until the stones are large Here, litholapaxy is better than any cutting operation It keeps the patient in the hospital but twenty four hours, and the number of cases of recurrence that one sees after litholapaxy, with a proper cystoscopy afterwards, is almost *nil* In neglected cases with large stones a cutting operation is often preferable

Dr William T Belfield, Chicago In nearly a hundred of my operations for stone, calculi were removed neither by crushing nor suprapubically, but by a simple median urethrotomy I have no doubt that had I been brought up in the classic shades of Harvard I should have removed some of these by a crushing operation But median urethrotomy gives advantages which litholapaxy cannot furnish, that is, drainage of the bladder, with less danger than a suprapubic operation So I think we should not allow to go unchallenged Dr Lower's statement that there are but two practical operations for stone in the bladder

Dr A. T Cabot, Boston Our experience in litholapaxy in children in this country, of course, is nothing as compared with the experience that they have in China and India, but against the remarks just made by Dr Swan we must remember the remarks of Keegan and Freyer They operated among a similar clientele, had an enormous number of stones and found the crushing operation in children quite feasible I have had very few Someone said that it was a very difficult operation in children That is all wrong It is very easy The bladder in children is small and globular and the stone cannot get away One must be gentle, but the manipulation is easy In the operations I have performed I have been delighted with the ease with which they were done Recurrence has always been an opprobrium of the crushing operation There is danger in any operation of fragments being left I have removed stones in a number of instances after suprapubic operations done for the removal of the prostate When one leaves a suprapubic wound it leaves a granulating surface on the inside, on which *calcareous matter collects and acts as a nucleus for stone* After litholapaxy I always wash my patient out about ten days later, with the idea that somewhere some little fragment may have caught among the folds and not have been removed I remember one case in which I did a number of operations The stone did recur The patient had three or four hundred stones at the first operation, all the way from the size of a good sized bean down to a grain of wheat It was one of my early cases, and I did not wash the patient out afterward, and within less than a year he was back again for a second operation I removed the stones again, they were multiple A fortnight later I washed out 150 minute separate stones from his bladder A week later I washed out fifty I washed him out once a week until I washed him once or twice without getting any I think that subsequent washing out is an important part of the operation

Dr Young spoke of Dr Bigelow's lithotrite I think that he is unaware of the fact that Dr Bigelow devised a fenestrated lithotrite which he occasionally used The fenestrated lithotrite cuts the large stones very easily In operating on children I always use a fenestrated lithotrite After he had broken the stones up Bigelow preferred the solid blade because he could put it down in the bottom of the bladder and crush the stone easily without any danger of thrusting fragments through against the floor of the bladder In my early cases I constantly operated in cases in which the prostates were not removed I have often seen the irritation disappear and the residual urine fall from several ounces to a few drams after removal of the stone One field for stone removal is when they first come into the bladder With my litholapaxy pump I have in my office removed quite a number of renal stones that had been passed from the kidney into the bladder and then had not passed out Of course, behind an enlarged prostate that has any residual urine whatever, a small stone has a very small chance of being passed out, and in these cases the use of the pump will save the patient the subsequent formation of a vesical stone

Dr W E Lower, Cleveland Dr Swan has given statistics for cystotomy far better than anything I have to offer The lithotritists are asking us to do the hard operations and they will do the easy ones The only thing we ask is that we be permitted to do the easy ones as well If the suprapubic cystotomy is properly done and the bladder closed, the patient has no greater discomfort than after the use of the lithotrite It is doubtful if he has as much because of less trauma to the urethra, for there is always a certain amount of trauma to the urethra after the use of the lithotrite and urination is more or less painful.

SEMINAL VESICULOTOMY

ITS PURPOSE AND ACCOMPLISHMENTS *

EUGENE FULLER, M D

NEW YORK

Since the operation of seminal vesiculotomy has been before the profession for a considerable period of time, no attempt will here be made to describe the procedure itself All those desirous of such information are referred to my previous articles[1] My first article was written during the experimental stage of the work, the second, after the procedure had established itself on a firm, practical basis In the second article it will be seen that some of the original experimental technic was abandoned and that improved features were substituted At present, having more than doubled my surgical experience with the operation since the 1909 article was written, my cases then having numbered only 126, I naturally feel that my technic and surgery are more competent than they were three years ago Still in the way of a general description of the operative procedure itself, there is little to add

To any one wishing to perfect himself in this particular, the following suggestions are offered The anatomy should be studied and dissections should be made on the cadaver In accomplishing such dissections the cadaver should be placed in the knee-breast posture, thus simulating conditions pertaining during actual operation Dissection should be made without cutting into the muscular structure of the perineal body, the rectal sphincter muscle or the blood-vessels encircling the anus If this is so done, the bursal space between the rectum and the prostate is entered without injury to a blood-vessel of any size In fact, in the performance of the actual operation the tying of a single blood-vessel is only exceptionally necessary After the bursal space is once entered, the finger-tip suffices, except occasionally when dense pathologic adhesions exist, in accomplishing a separation of the rectal wall from the prostate and seminal vesicles

Aside from an acquaintance with the anatomy of the region traversed by the operation, familiarity with the regional anatomy of the part to be attacked is most essential In common professional parlance, the term "prostate" is seemingly made to include not only the prostatic body proper, but also the seminal vesicles, and should an inflammatory or neoplastic tumefaction occupy a part or the whole of the postprostatic space, such lesion is generally classed also as prostatic, the idea that anything else could exist calling for a differentiation of the diagnosis not being apparently even thought of As the result of a regional dissection, just what constitutes the prostate, the seminal vesicles and the outlying region of the postprostatic space will become apparent

When one considers that the seminal vesicles are cavities for holding fluid, the walls of which, as with the bladder, are made up of muscular structure lined interiorly with mucous membrane, it is not difficult to picture the pathologic conditions so frequently encountered Such conditions in the great majority of instances have to deal with intraseminal vesicular infections of various descriptions, most of which have entered the cavities by the ejaculatory ducts, though in a minority of instances the invasion has been effected by penetrations through the sac walls The distention of the sac cavities due to muscular atony may represent a lesion in connection with which there is no intraseminal vesicular infection Severe grades of infection are not simply intravesicular, but involve the muscular walls of the sacs or (and this is frequent) invade also the outside fibrous lymph-spaces, a periseminal vesiculitis of greater or less degree resulting

As the seminal vesicle discharges its contents by the long narrow ejaculatory duct and only at infrequent intervals, it is readily seen that the organ is not well equipped by Nature to throw off spontaneously an infection, even when confined to the intravesical cavity, and much less so when the process has extended so as also to involve the sac walls and the perivesicular tissues In very extensive infections in which pus collects in the postprostate space outside the seminal vesicles, Nature, if left to herself may discharge the pus into the bladder through the trigonum, into the rectum by perforating the bowel wall, or she may find a way out along the same tract which I employ in reaching the seminal vesicles by operation In such unusual instances the abscess points into the perineum or to one side of the rectum When Nature is left to herself in such cases, the work is not apt to be well done, but requires for its completion much more difficult surgery than would have been necessary had operative interference anticipated natural efforts In most infections the process does not go to periseminal vesicular abscess formation, the bacterial invasion of the tissues causing varying lesser grades of lesions, largely in the nature of round-cell infiltration, serous extravasations and scleroses, all of which serve as lodging-places or nidi for infecting organisms

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* Read in the Symposium on Genital Pathology and Surgery in the Section on Genito-Urinary Diseases of the American Medical Association at the Sixty-Third Annual Session held at Atlantic City June 1912

[1] Fuller THE JOURNAL A M A May 4 1901, p 1228 Med Rec New York Oct 30 1909

With this understanding of the pathology of the part, it is easy to comprehend the reason for and the purpose of surgery in this connection The general surgical principle on which the operation of seminal vesiculotomy is based is simply that of drainage Most natural cavities of the body are being constantly opened and drained to free them of inflammatory processes, or of the resultant effects of such processes Consequently, there is no valid reason why surgical drainage should not be applied to these hitherto neglected organs

My reason for laying such emphasis on what probably seems a most elementary and self-evident principle is that there apparently exists a somewhat wide-spread misconception of the operation under consideration Although its name implies that there is no removal of the seminal vesicles, still many seem to think that such is the purpose of the procedure Another very prevalent erroneous conclusion is that incision into the seminal vesicle destroys the organ, and that an individual so operated on is on a par with one who has had the testicles removed The operation is not one of destruction, but of repair Every one knows that incisions for drainage into other cavities, such as the bladder, the renal pelvis and the mastoid, do not destroy functional conditions Their purpose is preservation The same applies to drainage of the seminal vesicles Where disease of the part has threatened or destroyed the sexual function, the operation acts as preserver or restorer Any drainage operation which does not accomplish its purpose is, of course, a failure If this were not the case one surgeon would be as good as another, and operative skill would be no longer an asset of value

In classifying my cases of seminal vesiculotomy, I have found it more satisfactory to group them according to the prominence of the clinical symptoms presented, rather than in accordance with the grades of the pathologic lesions Acting on this idea the four following groupings have been designated (1) urinary, (2) genital, (3) nervous and mental, (4) rheumatic In some cases the symptoms complained of are varied enough to come under all four groups In making the assignment these cases are placed in the group which accords with the most pronounced symptoms In most instances, however, there is little question as to which group should receive the assignment

In the first (urinary) group come most of the acute virulent cases, in which the gonorrheal process in its invasion of the seminal vesicles quickly extends beyond the sac walls and into the surrounding tissues, much postprostatic general tumefaction resulting In these cases the inflammation, after filling the loose periseminal vesicular tissues, works its way forward into the capsule of the prostate, so that when a digital examination per rectum is made a great bulging, rounded mass is felt, which may be extensive enough nearly to fill the space assigned to the rectum Such a tumefaction always markedly disturbs urination and often causes complete retention The tumefaction begins as a round-cell serous exudate, but often goes on to abscess These are the cases commonly mistaken for prostatic abscess The old way of treating them by perineal cystotomy was most unscientific as well as unsatisfactory Routier's method of draining them by way of an incision through the rectal wall has little to recommend it By seminal vesiculotomy, however, relief is prompt and radical Voluntary and free urination is usually reestablished thereby inside of twenty-four hours

Another class of cases in this group represents those in which there is a persistent catarrhal discharge from the seminal vesicles through the ejaculatory ducts, a third represents those in which the symptoms assigned to cystitis are most prominent, periseminal vesicular inflammation having extended into and involved the bladder floor

In the second group the symptoms of sexual impairment predominate, impotency or marked weakness being the usual feature

The third group, in which nervous and mental symptoms are most prominent, is numerically much smaller than it should be, for the simple reason that a smaller percentage of patients with such symptoms have consented to submit to operation Such individuals, because of the nature of their symptoms, are apt to be timid and apprehensive, and consequently are disinclined even to entertain the idea of relief through operation, much less accept such an issue Then, besides, very few neurologists are awake to the fact that surgery has anything to offer these patients in the way of relief, the result is that the great majority of such authorities when appealed to by these patients after the operative issue has been raised throw their influence strongly against the proposition As most neurologists are ready to admit that their methods of treatment, when applied to men suffering from mental or nervous disorders based on a sexual foundation, are very unsatisfactory and in the majority of instances thoroughly inefficient, and as these same authorities do not now hesitate to send their female patients who have similar symptoms to gynecologists for operation, in case their sexual organism is found to require such treatment, it seems most probable that it is only a question of a short time before neurologists will change their present attitude and give their male patients advice in harmony with that accorded the other sex, in other words, they will put the genito-urinary surgeon on a par with the gynecologist

Not everyone, of course who harbors a lesion of the seminal vesicles has nervous or mental symptoms These symptoms are chiefly observed when the sexual disorder has implanted itself on a person whose nervous organism is susceptible or vulnerable In some instances the symptoms are reflex in character, in others, a systemic toxemia, like that which exists in the rheumatic cases, is the accounting cause The mental symptoms complained of are often a confusion of ideas, inability to think clearly or to concentrate the mind, and are especially manifest after sexual disturbances or effort Mental depression, even to the extent of melancholia, is common Marked loss of initiative, trepidation and a high degree of timidity are not infrequently manifest In one instance illustrative of this condition, a man would not walk alone unless he was close to a railing or a fence for fear that he might fall Another physically very strong individual would not cross a ferry, unless his wife held his hand, for fear that he would be blown off These, of course are extreme instances In fact, hysteria in all its varying phases is to be encountered in a clinical study of these cases The nerve symptoms may be multiple and varying, just as in neurasthenia, or they may be fixed and definite In the latter condition, complaint may be of pain in the perineum, the rectum, the back of one or both thighs, the sacrum, the inguinal region, the scrotum, the loin, or elsewhere Such pain, it is often stated, is aggravated by sexual effort or disturbance

The fourth or rheumatic group is most interesting and very important Whereas most of the individuals assigned to the first group and practically all classed under the second and third groups are physically capable, all those of the fourth group are crippled to some extent, while very many of them are bedridden and unable in any degree to care for themselves

My investigations have shown that the ramifications and extent of gonorrheal rheumatism are much greater than is commonly supposed The acute rheumatic complications associated directly with gonorrhea have long been clinically recognized The chronic phase of the complication, however, beginning perhaps a considerable number of years after an infection, has not been recognized, and has been incorrectly diagnosed Tuberculous joint, arthritis deformans, gout, chronic inflammatory rheumatism, progressive muscular atrophy and myelitis of some form are among the diagnoses previously made in cases which I have cured through the performance of seminal vesiculotomy

This drainage operation, by tapping the septic focus, terminates the resulting condition of systemic toxemia, and with such termination there begins a resolution of the crippling lesions, the causative effects While in the acute cases resolution of the rheumatism and its effects following operation is very rapid, in the chronic cases it is naturally by comparison slow It is easy to realize that this must naturally be the case when one considers the atrophic muscular and other changes which are associated with joints and tendons that have for long periods been fixed and immovable In such instances, after the toxemia has disappeared, massage, passive movements and other agencies usually employed in convalescence from fractures or joint injuries of long standing are to be recommended In this connection, however, I would state that I do not begin the employment of these agencies so promptly after operation now as formerly I think it best for the first two or three months following operation to employ no manipulations aside from what the patient may voluntarily undertake If this is done the system is wholly free from all vestige of toxemia before the commencement of postoperative treatment Premature manipulations are associated with painful and inflammatory after-effects

In my earlier experience it was not uncommon to notice, a month or six weeks after operation, some temporary recrudescence of the rheumatic symptoms in cases in which all such symptoms had disappeared promptly following operation This I found to be due to the fact that the outer tract of the wound had been allowed to close before the region of the seminal vesicles had been sufficiently drained To obviate this the drainage-tubes are not now removed for ten days, or until such time as the deeper portion of the wound has thoroughly healed

Just what part the gonococcus itself plays in the causation of gonorrheal rheumatism has not been determined, and the more I study chronic conditions the less I feel inclined to put great responsibility on that organism In many of the chronic cases no gonococci can be demonstrated definitely to exist in the urinary tract or in the material expressed from the seminal vesicles Organisms, apparently streptococci, can, however, be found There is often positive clinical evidence that these individuals are not and have not been contagious in their coitus for a long period It may be that a toxin, a product of the gonococcus, of the streptococcus or of a combination of the two, which is responsible for the rheumatism, is generated in the seminal vesicles This is a laboratory problem yet to be solved In the meantime, I have on many occasions called attention to the fact that the term gonorrheal rheumatism is objectionable and faulty, especially in its application to chronic cases in which very likely the previous existence of a gonorrhea is an event of the forgotten past The term "absorptive or toxic rheumatism" besides being more accurate is also free from criticism

My clinical experience with seminal vesiculotomy now consists of 254 cases Out of this large number there has been no mortality The operative risk must therefore be slight, and with this showing adverse criticism based on the gravity of the procedure should receive no attention The postoperative disturbance, aside from that usually associated with the anesthetic, is slight Retention follows about once in five cases When it does occur the urine rarely has to be drawn more than a time or two Aside from the order to be prepared to use the catheter, if required, the chief direction is to give castor oil twenty-four hours after operation, and from that time on to see that the bowels are properly moved every day

My second article ended with the report of my one hundred and twenty-sixth case In thirty-five of these 126 cases the operation was undertaken for the relief of gonorrheal rheumatism In the 128 patients operated on since that report, rheumatism figured as the cause for operation in eighty-nine cases The reason for this marked increase in the rheumatic ratio in the second series can be accounted for as follows

The first time the operation was employed to relieve rheumatism was in connection with my thirty-eighth case, as before that I was not awake to the fact that the operation could be so employed Since then, the operation with a wider experience has been found applicable not only to the acute rheumatic cases, the only ones first tried, but also to the chronic cases As such affections cripple and physically incapacitate a greater percentage than do the other groups of symptoms, it is natural that the rheumatics should outnumber the others in seeking operation

Of the remaining thirty-nine cases, eighteen belonged to the first or urinary, fourteen to the second or genital, and seven to the third or nervous and mental group

Of the eighty-nine rheumatic patients there was not one who was not relieved in a most radical manner and who was not satisfied with the operative result Eighty per cent of the patients were well and free from all symptoms when they passed from observation a month or six weeks after operation All were instructed to report should any future disturbances arise nothing official has been heard from them The remaining 20 per cent, mostly representative of chronic conditions, I have not been able to keep under observation until a complete resolution of the rheumatism had taken place All of them had been so much improved that retention in hospital was no longer required M [illegible] had insisted on being discha[illegible] they [illegible] look after themselves, while two or three had been discharged for violation of disciplinary rules. I hear from these last patients occasionally, and all such reports are either cures or progressive improvements.

One man, operated on three years ago, after having been bedridden or about on crutches for seven years, has for the last two years been an orderly at the City Hospital, in perfect physical condition. A very few patients, mostly those with flat feet, were turned over to the orthopedic department after thoroughly convalescent. Several of the clinical patients, owing to their pain, had become addicted to the use of opium. In every such instance all opium was stopped at the time of operation. In these cases convalescence was, as a rule, somewhat slower, owing to the breaking of the drug habit.

Two of the eighteen urinary patients proved to have an underlying tuberculous condition, which prevented an operative cure. My rule is not to subject tuberculous seminal vesicles to this operation, and care is taken to avoid operation in such cases. One urinary patient, whose case was representative of periseminal vesicular abscess had to leave the hospital to resume work before he had recovered; the result was a relapse. This patient, when last seen, was much better. Three other patients sought their discharge from hospital before they had time to become cured. The remaining twelve patients passed from observation cured.

In nine of the fourteen genital cases the patients were satisfied when they passed from my observation. I have no reason to suppose that the results in the remaining five cases were not satisfactory; I have heard nothing to the contrary. It takes from three to six months to get the end-result in these genital cases, and before that time some of the patients disappear.

Operative results in the seven mental and nervous cases were all satisfactory, though two of the patients passed from observation somewhat prematurely.

These results, taken as a whole, are most satisfactory. Still, it is not expected that seminal vesiculotomy will ever become an operation to be performed by everyone professing efficiency in general surgery, and it is to be hoped that those who have not previously made an attempt to fit themselves for its technic will not try it. This may also be said with regard to many operations. Few, if any, attempt iridectomy, for instance, without preliminary training.

My reason for making these precautionary remarks is that the operation of seminal vesiculotomy is done under the guidance of the sense of touch rather than that of sight. Some surgeons are not trained to put any dependence on their touch, but must see everything before using a knife. Genito-urinary experts have to be trained in the touch. Certain of their operations, as litholapaxy, depend entirely on that sense. Anyone who has skill in surgical technic and also a finger trained in the rectal touch should have no trouble in becoming expert in seminal vesiculotomy; he will then be able to relieve a large class of patients who have hitherto been, as it were, surgical derelicts.

252 Lexington Avenue.

The Open Air Bedroom.—The ordinary bedroom for most persons is well enough. Its only trouble is that it does not admit enough air. Let us not drive out the occupant on this account, but reform the bedroom. It can be done with astonishing cheapness and ease, simply by putting in many windows.—E. Cummings in *Jour. Outdoor Life*.

DEATH AND BLINDNESS FROM METHYL OR WOOD-ALCOHOL POISONING

WITH MEANS OF PREVENTION

CASEY A. WOOD, M.D.
CHICAGO

Surely the man who wishes well of his country should be interested in preventable diseases. Inevitable evils one bears with greater or less equanimity, but those forms of ill health that are plainly avoidable should be ruthlessly traced to their sources and eradicated.

Hygienic crusades are all the more likely to be successful in America since we have recently experienced a great moral uprising against those deadly agents, adulterated foods and quack medicines. It is no longer respectable or safe for wholesale or retail purveyors of food and drink to substitute for them any poison their fancy dictates. The demand for articles that are at least what they claim or seem to be has at last become so loud and persistent that no government can afford to ignore it. Now that the sale of spoiled, noxious or adulterated food is beginning to be regarded as a low form of thievery not uncommonly tinged with manslaughter, the common people are likely to come into their own.

It is for the purpose of bringing to the attention of our citizens the dangers that lurk in the use of certain forms of methyl or wood alcohol that this paper has been prepared.

Thirty years ago poisoning from wood alcohol, methyl alcohol, wood spirit, methylated spirits, etc., was almost unknown. The disgusting odor and vile taste of this product of the destructive distillation of vegetable fiber were so repugnant to the palate and nasal organs that one would about as quickly drink crude petroleum. About 1890, however, a comparatively cheap method of "deodorizing" this ill-smelling and vile-tasting liquid was discovered, and under various names, such as "Columbian Spirits" (Fig. 1), "Purified Wood Alcohol," "Colonial Spirits," "Standard Wood Spirits" (on the Canadian market, Fig. 2), "Cologne Spirits," "Union Spirits," "Eagle Spirits," "Green Wood Spirits," etc., this violent poison was put on sale. It was widely and shrewdly advertised and all sorts of virtues were claimed for it, the chief being that it was a cheap and comparatively harmless substitute for ordinary ethyl or grain alcohol. Not only could it be used instead of grain alcohol in making varnishes, liniments, tinctures, hair-dyes, etc., and as a fuel in lamps and stoves, but also at first its poisonous character was denied *in toto*. This last claim led to its use not only for these purposes but also in the manufacture of Jamaica ginger, essence of lemon, liniments, alcoholic extracts, cheap whisky and proprietary "remedies;" generally speaking, in those instances in which the manufacturer regarded his business as a means of getting money "honestly" when there was no danger of being found out.

Soon, however, stories of sudden death as well as of total and incurable blindness following the use of this horrible poison began to appear, not only in medical journals but in the public press. It was not until a wholesale drug firm in Baltimore had been mulcted in heavy damages for attempting to "turn an honest penny" by the use of "deodorized" wood spirit as a substitute for the four-times-as-expensive grain alcohol in the manufacture of Jamaica ginger, that the trade began "to sit up and take notice."

Later, examples of wholesale poisoning began to be reported. Parties of all classes of people — workmen, picnickers, bar-room habitués, Indians, etc — indulging in cheap whisky and its substitutes died or became blind Still later, it was found that unfortunate painters, especially shellackers of beer-vats, working in confined and unventilated places, were stricken with blindness, and on investigation it was conclusively proved that the befouled, rebreathed and methylated atmosphere was responsible for the result Cheap varnish made with "Columbian Spirits" costing about 50 cents a gallon (grain alcohol is about $2 40 a gallon), had done its deadly work

In the years 1903-1904 the late Dr Frank Buller of Montreal and myself set about collecting the histories of cases of poisoning to that date Doubtless many instances of wood-alcohol poisoning escaped this inquiry, but we found and reported[1] 275 instances of death or blindness (sometimes both) directly traceable to drinking, or inhaling the fumes of "Columbian Spirits" or some other form of "deodorized" wood alcohol At that time we drew the following conclusions

1 Methyl, or wood alcohol, in any of its forms, and all methylated preparations as well, are dangerous poisons, menacing both life and eyesight

2 It is used as an adulterant of, and substitute for, grain alcohol in cheap whisky and other alcoholic beverages, not to mention Jamaica ginger, lemon extract and many other essences and flavoring fluids

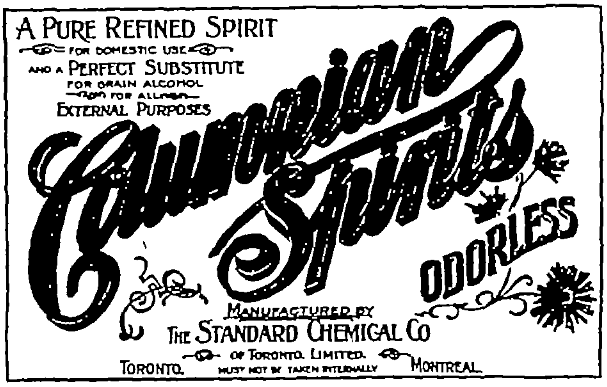

Fig 1 —A label used on Columnian [Columbian] Spirits Note how obscure is the warning not to take this poison internally

3 Methyl alcohol is largely used in the preparation of many proprietary and patent medicines, witch hazel, domestic liniments, as well as bay rum, cologne water, Florida water and other perfumes

4 The injury to the eyesight consists chiefly of a destructive inflammation of the optic nerve fibers or retinal elements (or both), followed by their atrophy

5 The symptoms of acute poisoning are gastro intestinal disturbances, more or less severe, accompanied by abdominal pain, general weakness, nausea, vomiting, vertigo, headache, dilated pupils and blindness If recovery does not occur, there is marked depression of the heart's action, sighing respiration, cold sweats, delirium, unconsciousness, coma and death

6 The blindness is bilateral and may set in a few hours after the contact with the poison, or it may be delayed for several days It is generally complete, with a subsequent improvement, and, finally, a relapse into permanent blindness

7 The diagnosis can hardly be mistaken Methyl alcohol poisoning presents a picture unlike that of any other intoxication Acute abdominal distress, followed by blindness, should always awake suspicion of methyl alcohol poisoning

8 The prevention of poisoning by this insidious drug can only be brought about by prohibiting [or rendering unprofitable] the sale of "deodorized" wood alcohol in all its forms The number of deaths may, meantime be limited by putting all methylated preparations on the list of poisons and prosecuting all persons adulterating foods and drinks with it Labeling it with the notice, 'This fluid, taken internally, is likely to *produce blindness" will certainly have a deterrent effect*

9 Methyl alcohol intoxication is an example of idiosyncrasy As in the case of several other poisons, some persons are largely immune so far as permanent damage to the organism is concerned If ten persons drink, say, 4 ounces of Columbian spirits within three hours all will have marked abdominal distress and probably four will die two of them becoming blind before death Six will eventually recover, of whom two will be permanently blind With still larger doses, the proportion of death and blindness will be greater

10 Poisoning by inhalation of the fumes of methyl alcohol generally occurs when the exhalations are mixed with rebreathed air, as in varnishing the interior of beer vats, closets or small rooms, etc It is also highly probable that in susceptible subjects repeated or even single methylated "alcohol rubs" may produce poisonous symptoms, through absorption of the spirit by the skin

11 Chronic (or partial) poisoning from methyl alcohol (in the shape of "nips" of methylated Jamaica ginger, bay rum punch made with Columbian spirits, etc.) is the most insidious and probably not an uncommon form of intoxication Its symptoms are not so pronounced or so easy of recognition as in the acute form, but the eyes, digestive apparatus and nervous system undoubtedly suffer

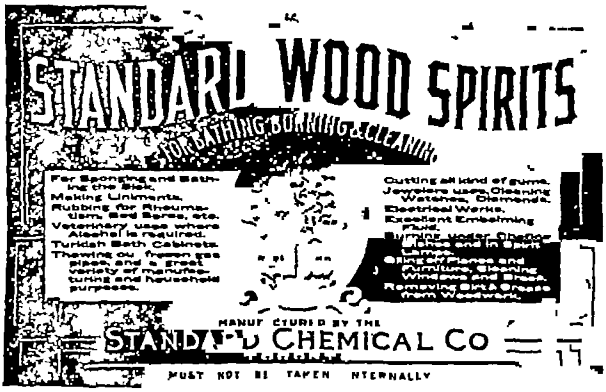
STANDARD WOOD SPIRITS
FOR BATHING BURNING & CLEANING
For Sponging and Bathing the Sick.
Making Liniments.
Rubbing for Rheumatism, Bed Sores, etc.
Veterinary uses where Alcohol is required.
Turkish Bath Cabinets.
Thawing out frozen gas pipes, and a great variety of manufacturing and household purposes.
Cutting all kind of gums.
Jewelers uses, Cleaning Watches, Diamonds.
Electrical Works.
Excellent Embalming Fluid.
MANUFACTURED BY THE
STANDARD CHEMICAL CO
MUST NOT BE TAKEN INTERNALLY

Fig 2 —Another deodorized wood alcohol poison It is recommended for bathing rubbing and sponging the sick for making liniments also for use in chafing dishes and in spirit lamps See how little is said about its poisonous qualities

12 The use of ethyl or grain alcohol in the arts, as in the manufacture of varnishes, as a burning fluid, for "stiffening" hats, lacquering brass, etc, is without danger to life or eyesight If a small percentage of naphthalin, for example, were added to it, the fluid would be undrinkable A combination of ethylic alcohol with 10 per cent of wood spirit would answer the same purpose Such a mixture is the 'methylated spirits" of Great Britain, where not a single case of acute poisoning or blindness from methyl alcohol is recorded, in spite of the extensive use of methylated preparations in the British Isles

13 The treatment of *methyl alcohol intoxication* consists chiefly in getting rid of the poison from the stomach and intestines by means of the stomach pump and rectal injections, stimulants, especially *ethyl alcohol*, strychnin and coffee, heat to the body and extremities

14 The treatment of the blindness is unsatisfactory

HOW WOOD ALCOHOL ACTS AS A POISON

The symptoms of poisoning from wood spirit, drunk, inhaled or rubbed in, either mbian Spiri
or as common wood alc th
cf measles or whooping
the ultimate form in
internal organs are not

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[1] Buller F and Wood C A Poisoning by Wood Alcohol The Journal A M A Oct 1 29 1904 pp 972, 1058 1117 1213 and 1289

however, that once absorbed, from either the stomach or the lungs, into the blood, it is not so easily eliminated or burned up as is ethyl alcohol, as which it masquerades in commerce.

This peculiarity of methyl alcohol is of considerable importance and interest because becoming cumulative in the system, small and frequent doses of the poison in the form of quack medicines, hair-tonics, cheap whisky, or essences, rubbing the body after Turkish and other baths, burning in "alcohol" lamps, varnishing pianos, beer-vats, small rooms, etc., insidious and often unsuspected but serious damage to the digestion, sight and nervous system may be induced.

After Columbian Spirits and similar "deodorized" poisons had been in the export market for a few years, we began to hear from other countries where, as in America, until this development of the wood-alcohol industry, poisoning from methylated spirits had been entirely unknown. About the time (the end of 1904) that twenty persons were poisoned in Kentucky, an equal number of wood-alcohol victims were, within twenty-four hours, killed and blinded in Dorpat, Russia. The Russian physicians were very much interested in and excited by this destruction, but our cases did not disturb us greatly; *we* had lived too long with the wood-alcohol "trust" for that. It only seemed to us that another infant industry had grown up and had reached a foreign shore. Later on, it will be seen how Columbian Spirits, or a replica of it, has recently invaded another country hitherto free from it.

As a result of these "accidents" a wide-spread agitation against the unrestrained sale of this poison was begun and kept up in both the medical and the lay press of the United States. As a further contribution[2] to this campaign I reported several examples of wood alcohol intoxication which had not been published up to that time, and closed with the following observations on its prevention:

> My colleague, Dr. Frank Buller, has suggested that every package, wholesale and retail, of "deodorized" wood alcohol, bear the warning, "This fluid, taken internally, is likely to produce blindness." Such a legend might be even more effective than the word "Poison" and the familiar picture of the skull and cross bones, chiefly because to most people the fear of blindness is more impressive than that of possible death. No doubt this precaution would limit the dangers of serious poisoning from methylated preparations, but it is very doubtful whether it will ever be entirely effective. Whenever a government permits the manufacture of "deodorized" wood alcohol (as in the case of Columbian Spirits in the United States and of Standard Wood Spirits in Canada) the only effective, natural safeguards (the offensive odor and taste) against ingestion of the poison are removed and the annual sacrifice to death and blindness will certainly continue. Either the manufacture and sale of "deodorized" or "purified" wood alcohol should be absolutely prohibited or, as in Germany and Great Britain, an untaxed (grain) ethyl alcohol, or one rendered undrinkable by the addition of mineral oil, wood spirit, naphthalin or some other nauseous compound should be allowed for use in the arts in the place of Columbian Spirits and similar dangerous preparations.
>
> The fact that the consumption of millions of gallons of cheap alcohol in other countries has been going on for years without fatal consequences, while in America we have had hundreds of deaths and cases of blindness from the employment of an agent that possesses no advantages over the British Methylated Spirits, or the German *Brennspiritus*, is surely an unanswerable argument in favor of this proposal.

After a time and partly in consequence of these investigations, but more directly as the result of discussions in the newspapers and of resolutions passed by the Section on Ophthalmology and House of Delegates of the American Medical Association, several bills were finally introduced into Congress providing for a cheap, commercial, grain alcohol which would render unnecessary and drive out of the market dangerous forms of "deodorized" wood spirit. The success of the movement was largely due to a committee of manufacturers formed to assist in securing cheaper alcohol for industrial purposes, headed by Mr. Henry Dalley of New York. After considerable discussion of the project by Congressional committees and the hearing of much evidence, especially that furnished by a number of workmen blinded by using Columbian Spirits in their ordinary occupations, the bill introduced by the Hon. W. Payne was passed by Congress, June 7, 1906. We now have as a result of this legislation what is known as "denatured alcohol," a harmless grain or ethyl alcohol, rendered unfit for drinking purposes by an admixture of various ingredients that do not destroy its value for domestic consumption and for the purposes of commerce.

Denatured alcohol is as cheap as or cheaper than Columbian Spirits or any other kind of "deodorized" wood alcohol and can be bought at drug-stores wherever the "deodorized" poisons are or have been on sale. Not only is there no longer the least excuse for the sale of "deodorized" wood spirits but, in my judgment, its manufacture should be prohibited by law. Why? Because it serves no purpose that "denatured" alcohol will not serve and because its existence is everywhere and at all times a menace to the public health. It looks, smells and tastes so much like grain alcohol that its very existence must ever be a challenge to life and sight.

Moreover, in spite of all the agitation in the press and the education of the public by other means an immense amount of ignorance exists and, in the nature of things, will continue to exist regarding the poisonous character and legal status of this deadly agent. For example, in commenting on a suit for damages brought by the widow of a poor varnisher, who had died from inhaling the poisonous methylated air of a beer-vat in which he had been working, a certain brewer alleged that the denatured alcohol used as a solvent for shellac "spoiled the beer" and was not as good as the "deodorized" product—which improved it, I have no doubt. Instead of being merely mulcted in heavy damages, as was the defendant in the case referred to, it is to be hoped that future criminals of this class may find their way to the penitentiary.

As another example of the ignorance still prevailing among those that ought to be better informed, let me refer to the first (or almost the first) cases of wood alcohol poisoning known in Germany. In that country, as in England, there has, for the past thirty or forty years, existed a cheap, tax-free commercial alcohol and, in consequence, there never has been room for any form of "deodorized" poison. For the same reason, also, there is not a single authentic report of poisoning in Great Britain. Whether a few barrels of American "deodorized" alcohol found sale in Prussia or whether the product was a local one seems difficult to decide, but shortly after celebrating the Christmas (1911) holiday "with the aid of wine," 161 inmates of a municipal shelter in Berlin became violently ill and seventy-one of them died. The German physicians knew little or nothing about our wide and varied experiences with methyl alcohol poisoning, and attributed the illness to decomsed meat and other causes until an official in the police partment found that the *Schnapps* which had formed portion of the Christmas celebration was largely arged with methyl alcohol Later, the suspected meat d sausage were found to be harmless, while a post-ortem examination disclosed the presence of methyl cohol in the stomachs of the victims

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[2] Wood, C. A.: Poisoning by Wood or Methyl Alcohol and Its Preparations as a Cause of Death and Blindness, New York Med. Jour., Jan. 7, 1905.

Another example — and many more might be given — the ignorance of those who ought to know better is en in the death (March, 1911) of one workman (J M) d the total blindness of his fellow workman L, due inhalation of wood alcohol fumes while varnishing e interior of a beer-vat in a Buffalo brewery For a ort time these "accidents" were attributed by certain ficials to the fumes of a charcoal stove!

That cases of death and blindness from "deodorized" ood alcohol are still occurring in America, and that olumbian Spirits and similar poisons are responsible r them and are still extensively sold can easily be monstrated, but I will report only a few more or less cent examples typical of serious intoxication

Commenting on the death of four men and the blind-ss of one man in Whitestown, Indiana, about Aug 16, 11, Dr P B Little of that town writes me

> It seems that these men purchased and made a mixture of gallon of wood alcohol and 3 gallons of grain alcohol and all nk freely of it The symptoms that followed soon after ere chiefly headache, nausea, vomiting, extreme weakness, mmy sweats, weak pulse, blindness, dilated pupils, cyanosis, ghing respiration, convulsions and death The blindness came six to eight hours before death The survivor of this bauch was the first to fall sick and the first to become blind

Gustav K., 21 years old, went to work for a contracting rnisher in New York the week before Thanksgiving, 11 He worked Thursday, Friday and Saturday, ovember 23, 24 and 25 He was then laid off until onday, December 4

An older brother of Gustav was also hired, beginning Monday Two other men and these two brothers ere the only men working on the job They had to awl through a small opening into the vats, which were 2 or 15 feet high, closed, dark and airless, except for ight ventilation through the small openings The rmer employer of the two brothers had used a small achine run by a dynamo for blowing out bad and sendg good air into the vats Such an engine costs about 65 and, in the opinion of Gustav K , he became blind ecause the employer would not spend anything on ventitors The victim stated that his employer obtained e contract by underbidding the man for whom the rothers had formerly worked

Gustav K worked Monday and Tuesday, December 4 nd 5 On Monday, after coming out of the vat he felt izzy On Tuesday, after arriving home, his mother emarked that he walked as if he were intoxicated ednesday morning he had a terrible sweat, vomited, nd had a rash on the face and body He tried to go to ork but had to come back before getting on the car e could not see very well then A physician was consulted twice but because he could not afford to pay the ee, the patient went to the Ophthalmic and Aural Institute on Tuesday, the 12th When he entered the hospital e could not see at all On Friday, the 15th, he could ee just enough to get about the room in the hospital

The older son, who had been working at the same me as his brother, worked through Wednesday, the 6th one day longer), and then showed some of the symptoms f poisoning, reeling headache, etc , but no more serious ffects The mother said, when seen on Thursday, that the son was then intending to return and continue the work, because he could not find work anywhere else

The two men who had worked with the brothers continued through Wednesday Both were poisoned, one died on Thursday and the other on Saturday From a child of one victim the following note was received

> Your letter to hand and wish to state that two or three days before my father's death he came home as though he was intoxicated He vomited all day Thursday, which was one day before his death He had chills and fever very often He must have been losing his eyesight before his death because my sister told me that although she had all the gas jets lit yet he begged her to light them, he also complained of his eyes burning like fire I am not living at home and did not see my father when he came home on Thursday night feeling worse than ever but I was there when he died, unconscious, Friday morning at half past five

I am indebted to Miss Louise Schofield, assistant secretary of the Committee on Prevention of Blindness of the New York Association for the Blind, for the pathetic report of the New York cases I may add that this committee, with Miss Louise Lee Schuyler as chairman and Miss Carolyn C Van Blarcom as secretary, is heartily and constantly working in conjunction with Dr F Park Lewis of Buffalo, N Y, chairman of the committee on Prevention of Blindness of the American Medical Association, to further the aims of their respective organizations

At the last meeting of the American Medical Association (Atlantic City, June 3, 1912) Dr Lewis reported that the extent of blindness due to wood alcohol is everywhere in evidence and the suggestion was made that every retail liquor-dealer in the country be sent a pamphlet acquainting him with the fact that in many cases even a teaspoonful of the drug will cause a man or woman to become sightless Efforts will also be made to make it illegal to sell wood alcohol except under the name of "wood poison "

Columbian Spirits and other dangerous forms of "deodorized" or "purified" makes of the wood alcohol poison are still sold in the drug-stores of the United States and Canada To those who think that poisonous imitations of common or grain alcohol are no longer a menace to the health, I would say that inquiry at the nearest large drug-shops and at most general country stores will throw some light on the subject

During the month of August, 1912, I purchased a small quantity of Columbian Spirits at ten of the principal drug-stores in Chicago, at the same time inquiring the price of "denatured' alcohol The results of this inquiry are set forth in the accompanying report Among other items of information it will be noticed that four drug-stores placed no "Caution" or "Poison' label on the bottle The others complied with the law on poisons to the extent of a precautionary notice or label but there was no registration of the name of the purchaser, as I believe there should be in the case of such a violent poison as "deodorized" wood alcohol Note also, that the price of "denatured" alcohol is generally quoted lower than Columbian Spirits What excuse, then, except ignorance, is there to justify the use of the latter?

No 1 Columbian Spirits, half pint, 20 cents Poison label on bottle This drug store does not carry denatured alcohol

No 2 Columbian Spirits 25 cents a pint Poison label on bottle Denatured alcohol 25 cents a quart

No 3 Columbian Spirits, 25 cents a pint No poison or caution label of any kind on bottle Denatured alcohol 25 cents a quart

No 4 Columbian Spirits, 20 cents a pint Poison label on bottle Denatured alcohol 25 cents a quart

No 5 Columbian Spirits 30 cents a pint Poison label on bottle Denatured alcohol 30 cents a quart

No 6 This drug store carried no Columbian Spirits Wood alcohol 20 cents a pint They inquired for what purpose the wood alcohol was to be used Poison label on bottle Denatured alcohol 20 cents a pint

No 7 Columbian Spirits, 25 cents a pint No poison or caution label on bottle Denatured alcohol 25 cents a quart

No 8 Columbian Spirits, 25 cents a pint Poison label on bottle Denatured alcohol 25 cents a quart

No 9 Columbian Spirits, 25 cents a pint "For external use" printed on label Denatured alcohol 75 cents a gallon

No 10 Columbian Spirits, 20 cents a pint No poison or caution label on bottle Denatured alcohol 25 cents a quart

Although ordinary "unpurified" wood alcohol or wood spirit is also a poison, its vile taste and smell are sufficient guarantees that nobody will either drink or inhale it to any deleterious extent For burning lamps, for cleaning brass and woodwork, etc, common wood alcohol is all right if one does not object to the odor and is unwilling to pay a few cents more for denatured alcohol It is quite otherwise with Columbian Spirits, Cologne Spirits, Standard Wood Spirits and all the other forms of "deodorized" methyl alcohol It is to the "pure, refined spirit for domestic use," the "perfect substitute for grain alcohol" (as the labels read) that one objects That subtle and often unsuspected poison has not only been directly responsible for the fate of hundreds of blind people but bids fair, under present conditions of sale and manufacture, to kill and blind additional hundreds

Although for half a century Great Britain, Germany and other European countries have yearly consumed millions of gallons of industrial grain alcohol, "denatured" by processes similar to ours, yet not a single instance of death or blindness has been reported from its occasional ingestion This satisfactory result is due not only to dilution of the poison, whose toxic properties are much modified by the large admixture of grain alcohol, but to the fact that it is almost impossible for even the most insensitive lungs and the most hardened stomach to receive and retain enough methyl alcohol in the various denatured products to induce serious consequences We are consequently justified in asserting that "denatured" alcohol is practically a harmless mixture and may be used for all the purposes, even as a beverage, for those who like it, without producing methyl alcohol blindness or death

HOW WE MAY MOST EFFECTIVELY PREVENT WOOD-ALCOHOL POISONING

Whatever occupation, professional or lay, you pursue, your aid in drawing attention to the hidden evils of "deodorized" methyl alcohol and all its preparations will be most valuable if you not only avoid the use of the poison yourself but discourage its employment by your friends, acquaintances and associates Tell them that we have an equally cheap, commercial substitute — a harmless "denatured" grain alcohol — that answers every purpose, domestic and other, of wood alcohol Also ask your druggist why he sells the poisonous article when there is a government-authorized grain alcohol that does not expose his customers to the dangers of Columbian Spirits and other forms of wood or methyl alcohol By thus discouraging the sale and use of "deodorized" and other forms of wood spirit you aid in that campaign of education which is the most effective agent in protecting the public body from one of the most insidious of our drug and food poisons

7 West Madison Street.

A PLEA FOR LONGER INTERVALS IN MILK-FEEDING *

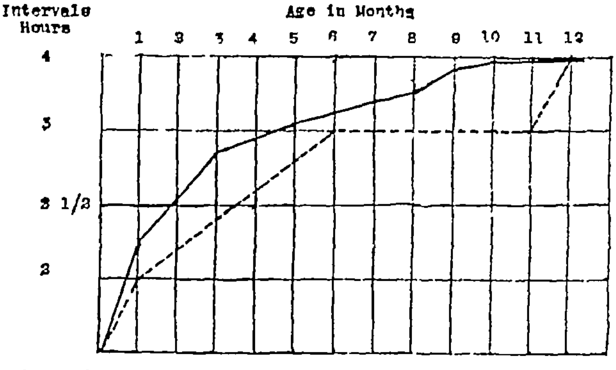
JULIUS H COMROE, A.M, MD
Physician to the York Hospital, etc.
YORK, PA

A careful and thorough review of standard medical text-books and current literature dealing with the principles of infant-feeding reveals the astonishing fact that comparatively little attention is devoted to one of the most important and vital aspects of this subject the intervals of milk-feeding during the first year The many thousands of general practitioners who necessarily must be guided primarily by these written expressions of experienced teachers have fallen victims to the same evil results that empiricism has produced in many other branches of medicine The conventional two-hour intervals during the first month, gradually increased to two and one-half hours until the third or fourth month and thereafter to three hours, have been copied from text-book to text-book and dismissed with little or no further consideration or comment

TABULATED REPLIES FROM 117 PEDIATRICIANS IN THE UNITED STATES AND CANADA

Age in Months	Intervals 2 Hour	 2½ Hour	 3 Hour	 4 Hour
1	66	17	33	1
2	27	40	39	2
3	12	40	63	2
4	8	9	99	6
5		3	105	9
6		8	78	36
7			72	45
8			57	60
9			42	75
10			30	87
11			30	87
12			30	87

Are longer intervals satisfactory? Yes 102 no 15



Composite chart showing natural trend for longer intervals. The line of dashes indicates the intervals computed from average text book teachings the solid line indicates the average intervals of 117 pediatricians in the United States and Canada

In order to determine whether or not the actual practices of the pioneers in infant-feeding coincided with the preponderance of didactic and written teachings of to-day, 135 circular letters were addressed to leading pediatricians throughout the United States and Canada, preference being given to teachers in medical schools and to authors of recognized text-books dealing with this topic A tabulation of the 117 replies received and the construction of a composite chart from these brought to light some interesting and valuable statistics, and demon-

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912.

strated beyond doubt that the trend toward longer feeding intervals is becoming almost universal During the first month of infancy only sixty-six, or 56 per cent, employed the two-hour intervals, seventeen, or 15 per cent, the two-and-one-half-hour intervals, thirty-three, or 28 per cent, the three-hour intervals, and one, Dr J P Sedgwick, or less than 1 per cent, the four hour intervals From the second to the fifth months, the three-hour intervals were employed with increasing rapidity, and thereafter the four-hour intervals were favored, especially on and after the sixth month These facts alone should at once prove the comparative uselessness and empiricism of modern text-book and possibly medical school teachings, and also emphasize the urgent necessity for some hasty revisions and additions along these lines

That each child is a law unto itself and that the intervals of feeding must be largely an individual and not a mechanical routine matter, no one will even question It is likewise well known that infants vary greatly in gastric capacity, in rapidity of digestion, in satisfaction as to the amount of feeding, and in susceptibility as to quality of food, etc, so that there can be no set rule regarding their feeding relative to time, quantity or quality of feedings, and each child must necessarily be fed as a unit rather than according to any inelastic fixed scheme or system It is also agreed that delicate and premature children, and babies that have been improperly fed or who suffer from malnutrition as a result of intestinal disorders, cannot be included in any general plan of feeding But it does seem quite apparent that overfeeding is one of the most common causes of nutritional disturbances in early infancy, and there is little doubt that this has been engendered oftentimes by the indiscriminate introduction of too many feedings in the twenty-four hours

TIME REQUIRED FOR EMPTYING STOMACH

At this juncture it is of the utmost importance to learn the period of time that is usually required for the stomach completely to empty its contents into the pylorus Leo made careful observations, with the aid of the stomach-tube, in thirty "normal" infants whose ages ranged from 2 hours to 12 months, and also in 104 babies who were suffering from various forms of gastro-intestinal diseases In the breast-fed he found the stomach empty in about one and one-half to two hours, and during the first week of life, in one hour In the artificially fed infants, and especially in the older children of the series, a portion of the food was found to remain in the stomach for a somewhat longer period

Pipping made similar examinations in twenty-nine normal infants under 3 months of age, and learned that the stomach emptied itself in about two hours

Czerny states that cow's milk takes up more hydrocholoric acid than does human milk, and in order to retain the bactericidal property of the gastric juice, which is due to the free hydrochloric acid, he urges the advisability of longer intervals between feedings, especially so when cow's milk is employed He found that whereas the stomach of a young infant is empty after an interval of two hours, when several feedings are given in rapid succession, considerable remains of the last meal may be found even after three or four hours This fact, in his opinion, also speaks in favor of lengthening the feeding intervals

Pfannenstill first employed the phenyl salicylate (salol) test for the determination of the time required for food to pass into the intestinal tract By this method phenyl salicylate was administered, and the urine, which was collected by means of a catheter kept in the bladder during the entire period of examination, was subjected to chemical analysis every five minutes In sixty health children the ferric chlorid reaction appeared in the urine forty to sixty minutes after the ingestion of food mixed with phenyl salicylate

Employing the same method, von Hecker found that the time of appearance of the ferric chlorid reaction varied considerably in direct proportion to the age of the child In my opinion this test is not a most reliable one as the elimination of phenyl salicylate, as computed by the urinary reaction, does not necessarily prove the complete emptying of the stomach contents

Meyer, who discarded milk entirely and employed barley-water, sterilized water or normal salt solution, on the ground that with these mediums organic acids do not appear and that the presence of hydrochloric acid in its free and combined state is thus more readily determined, found that in seventeen artificially fed children the stomach was empty in one to one and one-third hours These figures would naturally be comparatively useless in estimating the time required for milk to pass into the pylorus

Heiman made careful studies in a series of thirty-three cases including twenty new-born nursing infants from 3 to 7 days old, and thirteen artificially fed children ranging from 3 weeks to 7 months In the former, practically the same quantity of gastric contents was obtained at the end of one hour as at the termination of one-half hour, and after two to two and one-half hours, 0 5 to 3 c c could still be recovered with the stomach-tube In the bottle-fed babies the stomach was found empty in two hours in four out of thirteen cases, in five cases, at the end of three hours, and in the remainder, in about four hours

According to the investigations conducted by Tobler, and Bogen and Heubner, milk passes into the pylorus in the case of breast-fed infants in about two hours, and in those taking cow's milk, in about three hours Tobler, by employing variously colored milks, has further conclusively shown that each subsequent feeding forms a sort of layer about the earlier one, and that the food first ingested may thus be kept in the stomach more or less indefinitely if the feedings are given at too frequent intervals This constantly recurring contamination and overburdening of the stomach may result in fermentation, and in time in gastric dilatation with a loss of tone of the muscular coats of the stomach, and even in atrophy In their investigations with the Roentgen rays, by which as small a quantity as 5 c c could be determined without the aid of bismuth, Tobler and Bogen further verified the above results and found that the presence of fat considerably delays the emptying of the stomach (probably due to the inhibitory action of the fat on the secretory glands of the stomach and the long-continued closure of the pylorus) and that carbohydrates often act conversely

Mosenthal also found that it required about two hours for milk to pass through the pylorus in the case of breast-fed children and three hours in those taking cow s milk, and the same results were confirmed by the observations of T Wood Clarke, E Cautley, Miller and others

Chapin made careful observations in twenty-one babies suffering from various forms of malnutrition to determine the gastric motility Their ages ranged from 2 weeks to 1 year (one 2 weeks one 3 weeks, one six weeks, one 2 months six 3 months four 4 months, two 5 months, one 6 months one 7 months, three 1 year) Of nineteen patients examined, at the end of three hours only six had approximately empty stomachs, and these six, with one exception, were holding their own In the remaining thirteen cases there was a considerable residual amount of food still remaining in the stomach after three hours In the latter cases a positive Fehling's reaction was present in addition to curds and whey, either singly or together In five of seven patients examined at the end of three and one-half or four hours the stomachs were entirely empty, but in the remaining two cases of this series many curds were present at the end of four and one-half hours in one case, and a few small curds in the other In only two of seventeen patients examined at the end of two or two and one-half hours were the stomachs found empty, and in thirteen, large tough curds, or many smaller ones and whey were invariably present On these results Chapin concludes that in a large majority of cases the feeble infant with digestive disturbances has been fed at too frequent intervals At best, the musculature of the stomach and intestines is not highly developed during the first month of life, and less so in feeble infants Too often a second feeding is administered before the previous meal has entirely passed into the pylorus, with the expected result that each successive feeding has become contaminated The process of butyric acid fermentation has thereby been set up and kept in operation until, at last, a condition analogous to that of myasthenia gastrica is produced

TOO FREQUENT INFANT-FEEDING

With such an abundance of evidence obtained from the most careful and painstaking observations of eminent pediatricians, even the most skeptical will not deny that the intervals of feeding as usually taught are not compatible with physiologic findings It has been conclusively shown that the stomach in the healthy nursing babe is rarely empty in less than two hours, and that in the artificially fed, the time required is usually an hour longer According to Chapin and others these periods are further prolonged in the case of children suffering from various forms of malnutrition And it is reasonable to suppose that as the age increases the time required for emptying the stomach will naturally be lengthened owing to the fact that (1) the quantity and quality of food are increased and (2) as the stomach takes on greater powers of digesting its contents, its secretions act on the milk, forming compounds which remain longer in the viscus Time should therefore be permitted for the stomach to empty itself almost, if not completely, before another feeding is given

It is interesting to note that it is the almost unanimous finding of observers that in the artificially fed babe a decidedly longer time is required for complete emptying of the stomach Of the ninety-three replies to the query "Do you recommend as a rule longer intervals in the artificially fed (as compared with breast-fed) infants?" forty-eight answered in the affirmative and forty-five in the negative According to Engel, breast-milk is digested for the most part in the intestines, and to a lesser extent in the stomach the reverse being true in the digestion of cow's milk As a result of this physiologic fact the gastric juice of infants who are artificially fed is said to be less potent than that of breast-fed infants For this reason mother's milk, in spite of its early high fat content leaves the stomach more readily than does cow's milk

OBJECTIONS TO LONGER INTERVALS

The most serious objection entered against longer intervals of feeding in early infancy consists of the apparent necessity for administering too high quantities, as well as too rapidly increasing the strength of the milk mixtures in the artificially fed in order to maintain the required number of calories requisite for proper growth From the statistics previously recorded and in my own experience, these objections are based more on theoretical principles than on practical observations and results As Mosenthal has pointed out, the figures for gastric capacity, as they now are set forth in text-books, represent the anatomic capacity of the stomach, but the normal physiologic capacity, the amount of milk a child is capable of taking at one nursing, is considerably higher than these figures represent Holt has personally determined by post-mortem measurements the average capacity of the stomach in ninety-one infants from birth to the age of 14 months, but most careful clinicians have found that the amount of milk that can normally be ingested and digested has exceeded these average figures by from 1 to 3 ounces at the specified ages, especially so where the longer intervals have been employed Thus the average gastric capacities of infants at 1, 2 and 3 months of age are quoted respectively as 2, 3 37 and 4 5 ounces, whereas Caemerer recommends individual feedings of 3⅓ ounces (100 c c), 4⅓ ounces (130 c c) and 5⅔ ounces (170 c c) during these periods of infancy, employing the three-hour intervals and seven feedings a day during the first two months, and four-hour intervals thereafter These figures coincide essentially with my experiences As Caemerer further states, this is in marked contrast to the usual American two-hour interval, where the three-hour interval is usually not reached until the fourth month It is my firm belief that the results of the post-mortem findings relative to the capacity of the infant's stomach, in conjunction with the usual written and didactic teachings in reference to the size of milk-feedings, have had a strong tendency to make of the average practitioner a specific routinist in this connection

Several factors, both anatomic and physiologic, must be considered in computing the quantity of milk the babe may be fed at each nursing The stomach, which must be regarded as a dilated and specialized portion of the general intestinal tract, is provided with a submucosa of considerable thickness, composed of an abundance of fibro-elastic tissue which is loosely interwoven Unlike the intestinal tract elsewhere, its muscular tunic, in addition to the usual inner circular and outer longitudinal layers, is reinforced near the cardiac end by irregular bundles of oblique fibers Nature has evidently provided means whereby a certain degree of normal physiologic elasticity shall be allowed, thus easily permitting the accommodation of more contents than the post-mortem findings would seem to corroborate In early infancy, especially, it is an established fact that the contents of the stomach begin to leave it shortly after nursing has begun, thus in reality adding a portion of the pylorus to the actual capacity of the stomach That some infants have larger gastric capacities than others in direct proportion to their weight, other things being equal, seems at least reasonable If it be true, furthermore, that when shorter intervals are employed the stomach is not completely emptied when the next nursing is begun, a smaller relative "capacity" would naturally be expected at that time of nursing The utilization of any fixed rule governing the quantities for the individual feedings at various ages seems therefore impracticable My clinical observations, however, in common with others, have firmly established one undeniable fact, that the average normal child fed at longer intervals is able to ingest a larger quantity of milk than is usually prescribed, and invariably does so This is conclusively demonstrated by actually weighing the breast-fed babe immediately before and after nursing, as well as by the administration of larger feedings in the artificially fed and a resulting progressive increase of weight in both As a matter of fact, in my personal experience the usual normal maximum weight ordinarily attributed to the end of the first year is reached in many instances by the tenth month, and rarely later than the eleventh month, when the longer intervals of feeding have been judiciously employed Such evidence should certainly have a tendency to diminish any grave fears that the child fed at longer intervals is unable to receive a sufficient quantity of milk to meet its demands for growth and development

The same skepticism that exists in reference to the quantity prevails relative to the quality of the milk that must be employed It is widely stated that in order to satisfy the economy, when greater intervals of nursing are employed, the increased strength of the milk necessary to compensate for the diminution in the number of feedings would render it much more difficult to digest The fixed formulas variously recommended for the different periods of infancy have also been handed down, in many instances, in an empiric manner, and have frequently been responsible for an underfed baby at the hands of the automatic routinist In this connection also, each child must be a law unto itself, and only the most careful observations of the watchful practitioner should guide him in each individual case relative to the milk formula to be employed And here again, personal experience has shown that in the vast majority of cases infants fed at longer intervals obtain from the breast, and are able to digest when artificially fed, a milk of greater caloric value than the average baby fed at the shorter intervals can digest With few exceptions my artificially fed babies have received a 4-7-2 mixture by the fourth month and a 4-5-3 milk not later than the tenth month Such progress would be expected in consequence of the opportunity for complete evacuation of the stomach contents in addition to a much-needed period of absolute rest between each interval of apparently completed gastric digestion and the subsequent feeding It has been the rare exception, rather than the rule, that infants fed on the longer interval schedule have not been able easily to digest and thrive on whole cow's milk on or before the tenth month By the employment of the longer intervals, therefore, the above stated theoretical objections have been largely overcome, and the chief requirements in infant-feeding, namely, a quality of milk which is within the infant's power easily to digest, and a sufficient total quantity to assure a normal weight development, have been obtained

THE VALUE OF REST

Just as time and the resulting rest are absolutely essential for the fulfilment of good digestion, just so much, if not more so, is rest required for the progressive growth and development of the baby One well-known author, in common with many others, writes that "sleep is important for purposes of growth," and that "during the first month the infant sleeps about twenty-two hours out of every twenty-four" He then recommends ten nursings in the twenty-four hours, which will ordinarily consume a total of two to three hours Even though the function of nursing be a reflex one, in a great measure, the frequent disturbances necessarily produced by ten feedings, in addition to the wakefulness oftentimes produced during the daily attention to toilet, bath, etc, subtract largely from the rest the babe so much requires In the vast majority of babies fed at longer intervals, I have noted, in addition to the more rapid but uniformly progressive physical as well as mental development that the baby acquires a more decided resistance against the more common digestive disturbances, and even is less susceptible to the infectious diseases which so many mothers look on as being inevitable This acquired resistance, I feel, results largely from the more absolute rest which the child actually receives, in association with the resulting complete digestion and assimilation

SUCCESSFUL RESULTS OF LONGER INTERVALS

My own experiences with the longer intervals in milk-feeding during the first year have been uniformly and highly successful Although never guided by any fixed schematic feeding schedule, it has been my usual custom to recommend three-hour intervals in all healthy babes of the average normal weight, permitting seven feedings in the twenty-four hours, including the one night feeding Breast-fed babies are permitted to nurse until they are apparently satisfied, although usually a maximum of twenty minutes is ordered In the artificially fed, after the first four to seven days, a 2-6-1 milk is often prescribed, and an average feeding of 3 ounces is permitted, considerable emphasis being laid on the necessity for very slow nursing, and the extreme vigilance of the nurse in reference to discomfort, regurgitation, etc During the second, and rarely later than the third, month, being guided particularly by the digestive capabilities and the weight curve, four-hour intervals are ordered, permitting six nursings for the first one or two months, and five nursings thereafter As a general rule, a 4-7 2 mixture is reached not later than the fourth month, and a 4-5-3 milk by the ninth or tenth month, after which whole milk is generally employed In the healthy infant, weighing 9 pounds or more at birth, virtually the same general plan has been followed, except that the four-hour interval has been employed from the beginning, permitting six nursings in the twenty-four hours, until a natural rearrangement occurs, whereby one night nursing is volitionally dropped This often happens after the second or third month In these latter infants it has been my almost uniform experience that proportionately larger quantities as well as stronger formulas can be digested without any difficulty And the ease with which a four-hour interval can be established and maintained is surprisingly gratifying

The advantages of longer intervals in well-selected cases are numerous There is undoubtedly an almost total absence of even the mildest digestive disturbances, which would naturally be expected as a result of more complete digestion and assimilation Regurgitation is reduced to a minimum, if it is present at all, and vomiting is a rare occurrence The dreaded colic and constipation are far less frequent, and the weeping eczemas often resulting from gastro-intestinal auto-intoxication are rarely to be observed The infant develops a far better appetite, and obtains more as well as longer intervals of sleep, a pleasure and necessity which is appreciated and shared by the household There is in many instances even a better, and always uniformly progressive, gain in weight as compared with the average babe fed at shorter intervals Another, and by no means trivial advantage, associated th the longer in of
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for them, but who, for domestic and especially social reasons, do not feel justified in foregoing certain duties and pleasures which frequent nursing would demand Once convinced that a three-hour, or a four-hour interval, will not be a compromise for her own convenience but rather a benefit to her infant, the number of nursing mothers will with certainty increase, as will the number of living and healthy babes

Before concluding, I wish to reiterate that no attempt has been made to advance a system of feeding that might be employed as a routine measure If sufficient interest in the employment of longer intervals of feeding in early infancy has been aroused to stimulate its more common usage in well-selected cases, I shall feel that I have not labored in vain

This paper would be incomplete without an expression of my most sincere appreciation of the kindness of the many physicians who supplied invaluable information through the circular letters sent to them, as well as an acknowledgment of my thanks to the committee who conferred on me the distinctive honor and privilege of appearing before you

ABSTRACT OF DISCUSSION

Dr H. Lowenburg, Philadelphia In reply to a letter from Dr Comroe, I said that I did not endorse long interval feeding, largely because my individual experience did not warrant it Dr Comroe would have us become as dogmatic with regard to the long interval feeding, as he accuses most physicians of being with regard to the shorter interval, as universally employed and as modified according to age Pediatrics has not escaped the chaos in which modern medicine finds itself It seems to be the predominant idea that we must present some thing new, that we must give up the old simply because it is old, its tried worth to the contrary notwithstanding Years ago it was taught that the great trouble with infant feeding was the protein element We all believed it and practiced it and had our successes and our failures Then it was taught that sugar was the disturber Some believed it and some did not Those who did, obtained good results, so also did those who did not believe Now fat is the cause and there are those who can prove it so and others who cannot. It is not wise to disturb the mental equilibrium of the practitioner or to give up the practice which has been successful in private and hospital work simply because of conclusions that are reached by experimentation, the purpose of which is to prove a preconceived idea We can prove almost anything we start out to prove I will not give up short interval feeding until there are better proofs as to the benefits to be derived from the long interval feeding My experience does not agree with Dr Comroe's He says that children fed at long intervals weigh more in a year than those fed at short intervals I can show case after case in which short interval feeding with proper food provides a steady increase in weight My own child at 8 months weighs 22 pounds Dr Comroe, however, strikes the key note of the whole feeding situation when he says that each infant is a law unto itself If we have a case of vomiting, it stands to reason that we are going to feed that baby at longer intervals in order to rest the stomach If the digestive process is normal, there is no reason to interfere

Dr D J M Miller, Atlantic City Some years ago I had the opportunity to pass the stomach tube into a number of infants, and as I found, as a rule, that the stomach was not empty until about two and a half hours after feeding, I have fed all infants of 3 months and over every three hours I agree with Dr Lowenburg that the methods which have brought success in the past are the ones to follow in the present I think that in cases of gastric indigestion with vomiting long interval feeding is decidedly beneficial With the ordinary healthy baby however I think that the method which has been the result of so many years of experience, intervals of two and a half hours, is the safe one to pursue under 3 months

Dr John L. Morse, Boston I want to protest against the accusation that the American pediatricians are routinists, meaning by American pediatricians those who follow the typical American methods rather than the European I do not believe that those who feed babies in the Eastern states are any more routinists in their methods than the Europeans and the people in the Middle West, who, as a rule, follow the European methods We are just as willing as anybody else to feed the individual baby—in fact, more so, as it seems to me from the literature The whole stress of Dr Comroe's paper has been toward routine rather than away from it I know that there is nobody in Boston who teaches and I do not believe that any of us here teach that a baby of a certain age should be fed any special mixture I also feel absolutely sure we in the East do not overfeed our babies and that we do not have the trouble that we are said to have Our babies do thrive I do not believe that in Europe or in the Middle West they can show babies more healthy or of better quality or with less digestive disturbances than we can with what is called a routine treatment, but what is really an individual treatment The average well baby if given reasonable food in proper amount in the twenty four hours will take care of it, whether fed once in two, three or four hours, some babies do better on four than two, others better on two than four But when the baby is sick, then the question of gastric or intestinal indigestion comes in and one has to regulate the intervals as well as the percentages of food It seems to me that we are both right, and perhaps we are both wrong

Dr. L T Royster, Norfolk, Va It has been said a number of times that the key note is struck in individualization, which I think is quite true The baby used as a laboratory is perhaps an uncertain guide as to practical feeding The anatomic content of the stomach is one thing and the physiologic content another Given two babies of the same age and the same weight, we find a different stomach capacity Perhaps the almost universal conception of the baby's stool is the one thing that may be a fair guide as to our conduct in feeding But we cannot feed the baby so many grams of food and expect so many grams of stool, in other words, the baby is not a test tube Again, when we come to the question of measuring the contents of the baby's stomach from the standpoint of a stomach tube, it is difficult Perhaps the best plan is to weigh it on a carefully balanced scale If the contents of the baby's duodenum can be secured through a catheter, it is also possible in measuring the contents of the baby's stomach after two or three hours of digestion to measure too much by getting into the duodenum

The Eastern pediatrician does not work by rule of thumb, and those whose work I have seen have shown just as much individualization in treatment as anyone else When I answered Dr Comroe's letter, I answered decidedly that I had no rule

Dr. David E English, Summit, N J I disagree with Dr Comroe on only one point I do not feed babies with any regularity that is, by the clock I think how soon a baby should be fed depends entirely on how it has disposed of its last meal A baby cannot always digest and assimilate the same amount of the same kind of food in the same number of minutes I think that a baby should be fed when absolutely nothing else will satisfy it, in other words, when it has thoroughly digested the last meal, when the stomach has had time to rest and contract, and when the baby has cried long enough, then is the time to feed it, and it should be fed full

Dr. J H Hess, Chicago Nobody has said that we should feed premature infants anything but breast milk And every one here has agreed that we must feed the baby individually Now when you have fed the baby individually and fed it breast milk, you have pretty nearly done the whole thing My paper, referred to by Dr Comroe, written some months ago was not advocating a method but was simply a retrospection of a series of patients to ascertain what they had been fed These babies had been fed individually what was seemingly needed to make each one gain in weight The records were preserved and some time after I went over them to see what we had accomplished We found that the babies weighing under 1,500 gm (and in my series eight of them weighed under 1,500 and only one weighed 2,000 gm) had been fed 120 to 140 calories on an average, those weighing over 1,500 gm about 110 to 130 calories These apparently were ideal cases I believe that premature babies to gain must be fed more than a normal baby In our cases, none of those weighing less than 1,500 gm gained on less than 90 calories Three and four pound babies commenced to gain on 70 calories Since that time, however I have been feeding less frequently I now use the three hour intervals up to the time that the infants reach what would be a normal weight, except in the very small ones, whom I still feed every two hours with diluted mixtures, and then lengthen he interval and make up calories by concentration

DR THOMAS S SOUTHWORTH, New York Although we realize that a number have made use of it on their own initiative in this country, a large part of the movement toward four hour feeding has come to us from Continental centers I think one reason is that it is better suited to the type of artificial feeding which the Continental men use It is very much better for the use of whole cow's milk It is also better for more concentrated mixtures than those which we ordinarily use here in short interval feeding In cases in which the breast milk is scanty, however, the long interval feeding would be disadvantageous because the breast needs more frequent stimulation to produce sufficient milk

DR. JOHN ZAHORSKY, St Louis The time in which a baby's stomach becomes empty depends on the amount given Of course, in an infant that gets only half an ounce, the stomach will be empty more quickly than in one who gets 5 or 6 If the baby gets only 1 or 2 ounces from the mother, its stomach will be empty in an hour and a half, and it will tell you so very emphatically When a baby is fed on a four hour interval it necessitates one night feeding until the baby is several months old When a three hour interval feeding is used one can soon do without a night feeding, which gives the mother a rest This I consider one of the advantages of a three hour interval feeding

DR ISAAC A ABT, Chicago I am from the Middle West and should like to make a suggestion I think that it is a mistake to feel that there is a Western and an Eastern pediatrist, we should feel that there is an American pediatry We should forever abolish any idea that there is any sectionalism or any feeling that one section is better or worse than the other

DR J H COMROE, York, Pa I have endeavored to make it clear that I am opposed to routinism, and in favor of individualism in the feeding of babies In Dr Lowenburg's reply to my communication, he stated that he had never employed the longer intervals, it must therefore be both presumptive and difficult for one having had no experience along this line to discuss intelligently a paper of this kind Eminent pediatricians throughout the United States and Canada, from both the East and West, show that they are getting away from the rigid intervals of two, two and a half and three hours It is reasonable to conclude that if in their experience such excellent results are being obtained with the employment of the longer intervals, the present dogmatic teachings, both in schools and in text books, should be revised.

Sterilization of the Unfit in Switzerland.—Schlub reviews twenty two cases in Switzerland in which operative sterilization of defectives was advocated by the legal or medical authorities or both, but for various reasons it was actually performed only in fifteen Five different cantons contributed to the list There has been no legislation on the subject and this is the reason why the authorities in some of the cantons have refused to apply the measure The case histories are summarized including the ultimate outcome and the views of various authorities are cited showing the growing general acceptance of the principle of sterilizing the morally unfit Schlub's study of the subject appeared in the last *Schweizerische Rundschau für Med*, 1912, xiii, 37

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK NEW AND NONOFFICIAL REMEDIES "

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W A. PUCKNER, SECRETARY

NOVATOPHAN—Novatophan is ethyl 6 methyl 2 phenyl quinolin 4 carboxylate, $CH_3C_9H_4N\,C_6H_5COOC_2H_5$, 6 2 4=$C_{19}H_{17}$ O N, the ethyl ester of Paratophan, (6 methyl 2 phenyl quinolin 4 carboxylic acid)

Novatophan is a slightly yellow odorless and tasteless crystalline powder melting at 76 It is insoluble in water but readily soluble in alkalies hot alcohol and strong acids

If 0 1 0 2 Gm novatophan be boiled for a short time with 0 5 Cc sodium hydroxide solution U S P then 5 Cc iodine test solution added and again heated, the odor of iodoform should be apparent

If novatophan be dissolved in concentrated sulphuric acid a light yellow solution results which on the addition of bromine water yields a reddish yellow precipitate

If ferric chloride be added to an alcoholic solution of novatophan a yellow not a brown color is produced (difference from Atophan and Paratophan)

Actions and Uses—The same as Atophan (New and Nonofficial Remedies, JOUR A M A, March 2, 1912, p 633) but it is practically tasteless

Dosage—Same as for Atophan

Manufactured by Chemische Fabrik auf Aktien (vorm E Schering) Berlin Germany (Schering & Glatz New York) No U S patent or trademark

Novatophan Tablets—Each tablet contains 0 5 Gm (7½ grains) novatophan

HEXAL—Hexal is hexamethylenamine salicylsulphonic acid $(CH_2)_6N_4C_6H_3(OH)COOH.HSO_3$

Hexal is prepared by the interaction of an alcoholic solution of salicylsulphonic acid and an aqueous solution of hexamethylenamine

Hexal is a white odorless crystalline powder readily soluble in water slightly soluble in alcohol and difficultly soluble in ether having an acid taste

If an aqueous solution of hexal be heated to 45 or 50 C formaldehyde will be liberated If the residue be now made alkaline with sodium hydroxide and again heated ammonia will be liberated

If to a dilute aqueous solution of hexal ferric chloride test solution be added a violet color will be produced

If to an aqueous solution of hexal an aqueous albumin solution be added a white precipitate will form If to an aqueous solution of hexal bromine water be added an orange colored precipitate will be formed

With the exception of the tannic acid test hexal responds to the identity tests of the U S Pharmacopeia for hexamethylenamine

If 0 2 to 0 3 Gm hexal be fused with 2 Gm fusion mixture (sodium carbonate and potassium nitrate) the resulting mass dissolved in hydrochloric acid the addition of barium chloride test solution will produce a white precipitate

If 0 1 to 0 2 Gm hexal be moderately heated with 5 Cc concentrated sulphuric acid a carmin red color will be produced

If calcium hypochlorite solution be added to an aqueous solution of hexal a brown color gradually appears

A 5 per cent aqueous solution of hexal should not be changed by saturation with hydrogen sulphide or the addition of barium chloride solution After acidulation with nitric acid the addition of silver nitrate solution should produce not more than a slight opalescence

Actions and Uses—It is claimed that hexal has the action of hexamethylenamine combined with an anesthetic and astringent action on the inflamed mucous membranes of the biliary passages and urinary bladder without having a deleterious effect on t [illegible] lls

Hexal is claimed [illegible] ns of the bladder and [illegible] vent bladder infection It is also claimed to be useful in pyelitis and pyelonephritis and in any diseased condition of the genito urinary tract due to bacterial invasion It is said to be useful in the treatment of uric acid diathesis and uric acid concretions in the kidneys and urinary bladder

Dosage—1 Gm (15 grains) three to six times daily dissolved in a glass of water

Manufactured by J D Riedel Aktiengesellschaft Berlin Germany (Riedel & Co New York) No U S patent or trademark

Hexal Tablets, 0.5 Gm—Each tablet contains hexal 0 5 Gm (7½ grains)

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 1889)

MALIGNANT ENDOCARDITIS ULCERATIVE ENDOCARDITIS

Since we have learned that bacteria are probably at the bottom of almost any endocarditis, the terms suggested under the classification of endocarditis as "mild" and "malignant" really represent a better understanding of this disease They are not separate entities, and a mild endocarditis may become an ulcerative endocarditis with malignant symptoms On the other hand, malignant endocarditis may apparently develop *de novo* Still, if the cause is carefully sought there will generally be found a source of infection, a septic process somewhere, possibly a gonorrhea, a septic tonsil or even a pyorrhea alveolaris Septic uterine disturbances have long been known to be a source of this disease Meningitis, pneumonia, diphtheria, typhoid fever and rarely rheumatism may all cause this severe form of endocarditis

Ulcerative endocarditis was first described by Kirkes in 1851, was later shown to be a distinctive type of endocarditis by Charcot and Virchow and finally was thoroughly described by Osler in 1885

Ulcerative endocarditis was for a long time believed to be inevitably fatal, it is now known that a small proportion of patients with this disease recover Children occasionally suffer from it, but it is generally a disease of middle adult life Chorea may bear an apparent causal relation to it in rare instances

Ulcerative endocarditis may develop on a mild endocarditis, with disintegration of tissue and deep points of erosion, and there may be little pockets of pus or little abscesses in the muscle tissue If such a process advances far, of course the prognosis is absolutely dire If the ulcerations, though formed, soon begin to heal, especially in rheumatism, the prognosis may be good, as far as the immediate future is concerned If the process becomes septic, or if there is a serious septic reason for the endocarditis, the outlook is hopeless This form of endocarditis is generally accompanied by a bacteriemia, and the causative germs may be recovered from the blood

If a more malignant form of endocarditis develops on a mild endocarditis the diagnosis is generally not difficult If without a definite known septic process malignant endocarditis develops, localized symptoms of heart disturbance and cardiac signs may be very indefinite

If there is no previous disease with fever, the temperature from this endocarditis is generally intermittent, accompanied by chills, with high rises of temperature, even with a return to normal temperature at times There may be prostration and profuse sweats Even without emboli there may be meningeal symptoms headache, restlessness, delirium, dislike of light and noise, and stupor, even convulsions may occur The urine generally soon shows albumin, there may be joint pains, the spleen is enlarged and the liver congested Some definite cardiac symptoms are soon in evidence, with more or less progressive cardiac weakness

Characteristic of this inflammation is the development of ecchymotic spots on the surface of the body, especially on the feet and lower extremities Sooner or later in most instances of the severe form of this disease emboli from the ulcerations in the heart reach the different organs of the body, and of course the symptoms will depend on where the emboli locate If in the abdomen, there are colicky pains with disturbances, depending on the organ affected, if in the brain, there may be paralysis, more or less complete If an infarct occurs in one of the organs of the body there must of necessity occur a necrosis of the part and an added focus of infection If a peripheral artery is plugged, gangrene of the part will generally occur, if the patient lives long enough

TREATMENT

If pneumonia or gonorrhea is supposed to be the cause of the endocarditis, injections of stock vaccines should perhaps be used If the form of sepsis was not determinable, streptococcic or staphylococcic vaccines might be administered It is still a question whether such "gunshot" medication with bacteria is advisable Patients recover at times from almost anything, and the interpretation of the success of such injection treatment is difficult Exactly how much harm such injections of unnecessary vaccines can produce in a patient is a question that has not been definitely decided Theoretically an autogenous vaccine is the only vaccine that should be supposed to be successful with our present knowledge The vaccine treatment of ulcerative endocarditis was not shown to be very successful by Dr Frank Billings in his investigation a short time ago[1]

Other treatment of malignant endocarditis includes treatment of the condition that caused it plus treatment of "mild" endocarditis as previously described, with the meeting of all other indications as they occur As in all septic processes, the nutrition must be pushed to the full extent to which it can be tolerated by the patient, namely, small amounts of a nutritious, varied diet given at three-hour intervals

Whether milk or any other substance containing lime makes fibrin deposits on the ulcerative surfaces more likely or more profuse, and therefore emboli more likely to occur, is perhaps an undeterminable question In instances in which hemorrhages so frequently occur, as they do in this form of endocarditis, calcium is theoretically of benefit Quinin has not been shown to be of value, nor has salicylic acid, unless the cause is rheumatism Alcohol has been used in large doses, as it has been so frequently used in all septic processes If the patient is unable to take nourishment in any amount, small doses of alcohol may be of benefit It is probably of no other value It is doubtful whether ammonium carbonate tends to prevent fibrin deposits or clots in the heart, as so long supposed In fact, whenever the nutrition is low and the patient is likely to have cerebral irritation from acidemia, whenever the kidneys are affected, or whenever a disease may tend to cause irritation of the brain and convulsions, it is doubtful if ammonium carbonate or aromatic spirit of ammonia is ever indicated Ammonium compounds have been shown to be a cause of cerebral irritation

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[1] Billings, Frank Arch Int Med. November 1000 p 400

Perhaps the most advisable internal antiseptic treatment is that of hexamethylenamin This drug should be given in doses of 0 3 gm (5 grains), dissolved in plenty of water, once in six hours The administration of mercury in any amount or of the sulphocarbolates or any phenol preparation is probably of not so great value as hexamethylenamin Intestinal antisepsis may be attained more or less successfully by the administration of yeast or of lactic acid ferments together with suitable diet The nuclein of yeast may be of some value in promoting a leukocytosis It has not been shown, however, that the polymorphonuclear leukocyte increase caused by nuclein has made phagocytosis more active

Malignant endocarditis may prove fatal in a few days, or may continue in a slow subacute process for weeks or even months

CHRONIC ENDOCARDITIS

It is not easy to decide just when an acute endocarditis has entirely subsided and a chronic, slow-going inflammation is present It would perhaps be better to consider a slow-going inflammatory process subsequent to acute endocarditis as a subacute endocarditis, and an infective process may persist in the endocardium, especially in the region of the valves for many weeks or perhaps months, with some fever, occasional chills, gradually increasing valvular lesions and more or less general debility and systemic symptoms Such a subacute endocarditis may develop insidiously on a previously presumably healed endocardial lesion and cause symptoms which would not be associated with the heart, if an examination was not made Sometimes such a slow-going inflammatory process will be associated with irregular and intangible chest pains, with some cough or with many symptoms referred to the stomach, so that the stomach may be considered the organ that is at fault. There may be dizziness, headache, feelings of faintness, sleeplessness, progressive debility and a persistent cough, with some bronchial irritation and with occasional expectoration of streaks of blood, which may cause the diagnosis of incipient tuberculosis to be made In other words, the need of a careful general examination must be emphasized again before a decision is made as to what ails the patient, or before cough mixtures are given unnecessarily, quinin is prescribed for supposed malarial chills, or various diets and digestants are recommended for a supposed gastric disturbance

The term "chronic endocarditis" should be reserved for a slowly developing sclerosis of the valves This may occur in a previous rheumatic heart and in a heart that has suffered endocarditis and has valvular lesions, or it may occur from valvular strain or heart strain from various causes, it is typically a part of the arteriosclerotic process of age and is mostly manifested at the aortic valve

Rheumatism is the cause of most instances of cardiac disease which date back to childhood or youth, while arteriosclerosis is the cause of most cardiac diseases in the adult In the former case it is the mitral valve which is the most frequently affected, while in the latter it is the aortic valve Any cause which tends to induce arteriosclerosis may be a cause of chronic endocarditis, such as gout, syphilis, chronic nephritis, alcoholism, excessive use of tobacco, excessive muscular labor and hard athletic work Lead is also another, now rather infrequent, cause Severe infections may tend to make not only an arteriosclerosis occur early in life, but also a chronic endocarditis Heart strain may also be a cause of chronic endocarditis especially at the aortic valve Forced marches of soldiers, competitive athletic stunts, and occupations that call for repeated hard physical strain may all cause aortic valve disease Tobacco, besides increasing the blood-tension and thus perhaps injuring the aortic valve, may weaken the heart muscle and cause disturbance and irritation and perhaps inflammation of the mitral valve

There is no age which is exempt from valvular disease, but the age determines the valve most likely to be affected If endocarditis occurs in the fetus, it is the right side of the heart that is affected, in children and during adolescence it is most frequently the mitral valve that is involved, while in the adult or in old age it is the aortic valve that is most likely to become diseased Statistics have shown that the valves of the left side of the heart are diseased nearly twenty times as frequently as those of the right side of the heart They also show that the mitral valve is diseased more than one and one-half times as frequently as the aortic valve Early in life probably both sexes are equally affected with valvular disease, with perhaps a slight preponderance among females, because of their greater tendency to chorea Females also show a greater frequency to mitral stenosis than do males Aortic disease, on the other hand, from the very fact of their strenuous life and occupations, is nearly three times more frequent in men than in women

If a chronic endocarditis has followed an acute condition, some slight permanent papillomas or warty growths may be left from the healed granulating or ulcerated surfaces Sometimes these little elevations on the valves become inflamed and then adhere together or adhere to the wall of the heart, and thus incapacitate a valve Sometimes these excrescences undergo partial fatty degeneration, or may take on calcareous changes and thus stiffen a valve

If the chronic inflammation is not superimposed on an acute endocarditis there may be no cell infiltration and therefore no softening, but there is a tendency to develop a fibrillated structure, and a fibroid thickening of the endocardium occurs, especially around the valves This induration causes contraction and narrowing of the orifices with shortening and thickening of the chordae tendineae, and the valves imperfectly open, or no longer close Fatty degeneration may occur in the papillary growths with necrotic changes, and this may lead to the formation of atheromatous ulcers which may later become covered with lime deposits, and then a hard calcareous ring may form Fibrin readily deposits on this calcareous substance and may form a permanent capping, or may slowly disintegrate and allow fragments to fly off into the blood-stream and cause more or less serious embolic obstruction If this chronic endocarditis develops with a general arteriosclerosis, the same inflammation soon occurs in the aorta, and, following the endarteritis in the aorta, atheromatous deposits may also occur there Chronic endocarditis of the walls of the heart, not in immediate continuity with endocarditis of the valves, is perhaps not likely to occur, except with myocarditis

A subacute or a chronic infective endocarditis should be treated on the same plan as an acute endocarditis, which means rest in bed and whatever medication seems advisable, depending on the supposed cause of the condition

A chronic endocard [illegible] part of a [illegible]
arteriosclerosis requi [illegible]
directed toward [illegible]
disease

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THE NERVOUS SYSTEM AND METABOLISM

The muscles, the secretory glands and the central nervous system preeminently represent the physiologically active tissues of the organism Their function exhibits itself in the familiar manifestations of movement, secretion and cerebration, respectively, but in the case of the muscles and glands, at least, there are well-known attendant phenomena characteristic of most physiologic activities in which a transformation of energy is concerned Heat is evolved and results in a transitory rise of temperature of the individual tissue or even the organism as a whole, carbon dioxid is eliminated in greater amounts, and this waste product serves as an index of the augmented chemical transformations going on while most striking of all, perhaps, is the increased consumption of oxygen—a typical indicator of heightened metabolism

Despite the obvious fact that the functioning of the higher nervous system must represent physiologic activity of a high order, it has been far from easy in the past to connect this with any of the evidences of metabolism so prominent and characteristic in the work of the other tissues mentioned As a result there has arisen the tendency to deny that nervous activities are accomplished with any demonstrable—or at all events, any noteworthy—transformations of energy The higher activities of the nervous system, such as are commonly termed "mental work," have rather been assumed to be characterized by a unique *quality* of participating change rather than by any measurable transformation of potential energy or quantitative metabolism of matter The make-up of the excreta has not been found notably altered after intense nervous response and the evidence for heightened gaseous exchange or respiratory metabolism is commonly considered to be negative

In accepting such conclusions respecting the apparent non-participation of the nervous system in the familiar augmentation of energy changes manifested by other tissues during their physiologic activity, it must be recalled that the nervous system comprises decidedly less than 5 per cent of the entire body It is accordingly quite conceivable that small increases in metabolism due to the greater work of this quantitatively minor organ might be hidden in the incidental variations due to the relatively great bulk of the other tissues Various investigators have insisted that the central nervous system makes an exceptionally large demand for oxygen on the circulation Lately Alexander and Révész[1] of Budapest have studied the gaseous metabolism of the brain, using optical stimuli as a mode of exciting the activity of this organ They reach the conclusion, apparently substantiated by their experimental findings, that the thus augmented function of the brain is attended with an increased consumption of matter and energy, evinced in the increased utilization of oxygen under such conditions of activity This result, of course is more in keeping with what a rational conception of the work of vigorously responding living cells would lead one to expect If this revision of current views will stand the test of future criticism and further experiment under even more crucial conditions, a supposed exception in the domain of physiologic functions will be eliminated

METHYL ALCOHOL AS A POISON

The history of toxicology furnishes repeated instances of the beneficial influence which accidental misfortune in the nature of obscure intoxication has indirectly exerted on the scientific study of poisons The widely discussed fatalities which occurred last winter in the neighborhood of Berlin as a consequence of the drinking of liquors which were contaminated with wood alcohol[2] served to direct attention again to the peculiar toxic character of methyl alcohol in contrast with the chemically closely related grain spirits, or ethyl alcohol As a consequence a number of valuable investigations have since been undertaken to elucidate some of the debated points in relation to the toxic action of alcohols

The German investigations of Voltz and Dietrich[3] were indicative of a minor participation of methyl alcohol in metabolism, in contrast with the ready combustion of the ordinary ethyl alcohol A further highly significant feature is the slow elimination of the wood spirits and its conversion products from the organism leading to a subtle danger in the form of accumulated toxic products France has now furnished further scientific data collected by Professor Nicloux and Dr Placet[4] Among the details of interest is the fact that for a single large dose (that is, acute poisoning) methyl alcohol may show a lower toxicity than does ethyl alcohol With either poison it is uniformly found that the brain retains more of the alcohol than do any of the other familiar organs, showing a sort of specific affinity in accord with what might be expected from its lipoid make-up The alcohols, like ether, chloroform and other volatile narcotics, are notably soluble in lipoids such as those characterizing the nervous system

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[1] Alexander F and Révész G Ueber den Einfluss optischer Reize auf den Gaswechsel des Gehirns, Biochem Ztschr 1912 xliv 95 Alexander F Untersuchungen über den Gaswechsel des Gehirns ibid p 127

[2] See Berlin Letter THE JOURNAL A M A Jan 27 1912 p 290 Feb 3 1912 p 358 Vienna Letter Feb 10 1912 p 422 The Menace of Wood Alcohol editorial July 20 1912 p 200

[3] Völtz, W and Dietrich W Die Beteiligung des Methylalkohols und des Aethylalkohols am gesamten Stoffumsatz des tierischen Organismus Biochem Ztschr 1912 xl 15

[4] Nicloux Maurice and Placet André Nouvelles recherches sur la toxicité l élimination la transformation dans l organisme d l alcool méthylique Comparaison avec l alcool éthylique Jour d physiol et de path gén 1912 xiv 916 See also Langgaard A Berl klin Wchnschr Sept 2 1912 and Rühle ibid Nov 4 1912 p 2128

When intoxication under chronic conditions, that is, with repeated small doses, is made the subject of consideration, however, the superior toxicity of methylated spirit at once comes into evidence This point was long ago emphasized by Hunt,[5] who noted that the great difference between the toxicity of methyl and ethyl alcohols might easily be overlooked entirely in experiments in which only the effects of single large doses were studied The French investigators, like their predecessors, have indicated anew that the probable explanation of the unduly pronounced poisonous character of the methyl alcohol is associated with the failure of combustion and the delay in elimination It has been suggested that the slowness in the removal of toxic products from the body may explain the onset of blindness which so frequently follows methyl alcohol poisoning in man, for, as Hunt remarks, highly differentiated nerve structures, such as those of the retina, are especially likely to suffer when exposed to the action of a poison for some time

With respect to the nature of the products, other than the unaltered methyl alcohol itself, which constitute the factors detrimental to health, it is impossible to give a final answer Pohl[6] has shown that the poisonous formic acid undoubtedly results and the production of formaldehyd as an intermediate product has also been suggested Methyl alcohol undergoes the same change in the human body as in that of the experimental animals, its administration to man led to the appearance of formic acid which was slowly excreted in the urine

Nicloux and Placet have raised again the question of the relative participation of by-products or impurities in the noxious effects of wood alcohol They believe that neither the slow elimination nor the possible accumulation of methyl alcohol and its derivatives are by themselves sufficient to explain the numerous cases of poisoning which have now been collected in the literature It is therefore logical to suggest that either man must be particularly susceptible to the toxicity of methyl alcohol, or impurities, which frequently accompany it, have a contributory share in producing the untoward results The "impurity" hypothesis has long assumed an unfathomed importance in numerous instances in which lack of knowledge or rather paucity of accurate information of all the factors, has driven an observer to seek a new explanation for his facts The impurities in anesthetics, the fusel oil in whisky, the furfural in tobacco-smoke — all have at various times been charged with a prominent share in some harmful experience It is true that some of these accessory factors are *per se* exceedingly toxic and detrimental, but the question and real possibilities of relative dosage are rarely worked out in a convincing fashion in the impurity arguments Without denying the possible importance of contributory accidental components, let us not overlook what is after all the fundamental point, namely, that chloroform, nicotin and ethyl and methyl alcohols are all poisons This fact must not be overshadowed by the more problematic possibilities of incidental impurities The paper by Dr Casey A Wood in this issue is a forceful reminder of the menace with which we are continually confronted in this country so long as the education of the public with regard to the dangers of wood alcohol is neglected and suitable legal safeguards are not provided and enforced

THE PHYSIOLOGIC EFFECTS OF COPIOUS WATER DRINKING WITH MEALS

Within the last five years much experimental work has been done by P B Hawk and his co-workers[1] in the effects on digestion and the metabolic processes produced by copious ingestion of water with meals Strangely enough, little work had been done on this subject previously, as the conclusion had been accepted on theory without experimental evidence that water taken with meals would dilute the digestive juices and hence would retard digestion Experiments on dogs proved that the ingestion of quantities of water with food caused a marked increase both in the quantity of the gastric juice and in its hydrochloric acid content Further, a dog could fast longer with less loss of weight and strength if allowed an abundance of water This indicates that water promotes economical metabolism

Hawk then carried out a series of experiments in which healthy young men were put on a uniform diet and their food and excreta analyzed quantitatively The experiments were divided into three periods a preliminary period, during which the subjects were brought into a condition of approximate nitrogen equilibrium by several days of uniform diet and light exercise, the experimental period, during which definite quantities of water were added to each meal, and a period during which the effects of the experiment were watched for a number of days with uniform diet without the added amount of water In some cases 500 c c and in other cases 1,000 c c of water were taken with each meal in addition to the daily amount of water normally taken The subjects were weighed daily and analyses made of the excreta collected as twenty-four-hour specimens

An expected result was the immediate increase in the quantity and decrease in the s[illegible]ty of the urine

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[5] Hunt, Reid The Toxicity of Methyl Alcohol Bull Johns Hopkins Hosp 1902 xiii 213

[6] Pohl J Ueber die Oxydation des Methyl und Aethylalkohols im Thierkörper Arch f exper Path u Pharmakol 1893 xxxi 281

[1] For references to papers [illegible] M A. 1912 p 118 The C[illegible] Exper Med. 1908 x 820 [illegible] 1080 Jour Biol Chem 10[illegible]

Accompanying this was a decided increase in the ammonia-nitrogen and chlorin excretion Hawk explains this as a result of the increased secretion of hydrochloric acid by the stomach due to the stimulating effect of the water This acid, being neutralized by the ammonia formed as a result of protein consumption in the tissues, gave the increased output of ammonia and chlorin, probably as ammonium chlorid There was also a decrease in the uric acid content and an increased allantoin output which is tentatively attributed to the more complete oxidation of the waste products Analyses of the stools showed a decrease in the fecal output both wet and dried This was accompanied by a decrease in the fats and carbohydrates excreted, in the fecal nitrogen and in the actual bacterial content The intestinal putrefaction was decreased as measured by the indican output This is ascribed to the inhibition of the indol-forming bacteria due to the accelerated absorption of the products of protein digestion More complete absorption of all foods leaves less culture medium for bacteria, which may explain the decrease in fecal bacterial content Though the nitrogen of the urine was increased, the fecal nitrogen was decreased and quantitative analysis of the total nitrogen ingested and excreted showed that the body was storing nitrogen In other words, the system was laying up protein material All this would indicate that the digestion, absorption and economical utilization of proteins, fats and carbohydrates had been promoted by ingestion of water with meals

The amylolytic activity of the feces, denoting, according to Wohlgemuth, the content of pancreatic ferment present, was increased over that of the period of average water ingestion Hawk interprets this reservedly as indicating a stimulation of the pancreatic function

The subjects showed increase in body weight and a general improvement in physical and mental condition There were many desirable and no undesirable results The effects were more pronounced when larger quantities of water were taken The results were not temporary but persisted after the close of the experiment As suggested previously in these columns,[2] the copious drinking of water with meals should not be practiced indiscriminately Certain pathologic conditions would be a distinct contra-indication to copious water-drinking Also experiments have established that digestion is retarded until the stomach contents have been brought to the body temperature Hence large quantities of very cold water would be distinctly non-beneficial It would be of interest to know whether equally favorable results would follow if the increased amount of water were taken between meals instead of with meals As the matter stands, the experimental evidence seems to refute the theories previously held regarding the effect of water taken with meals

ARTERIAL HYPERTENSION AND DIET

Heightened arterial tension is a phenomenon of increasing frequency among the population of civilized countries It is making its appearance at an earlier age with the progress of the decades Wherever hypertension is recognized, it is looked on as the sign of an impending arteriosclerosis, the more pronounced features of which may still be in a latent stage This symptom, which is yearly more adequately recognized in its incipient form, owing to the introduction of improved clinical methods of measuring blood-pressure demands earnest consideration because of the suggestion of forthcoming pathologic dangers which it furnishes

Various causes of arterial hypertension, whether assumed or demonstrated, are too familiar to need rehearsing in detail here It should always be remembered that the rise in blood-pressure is in no sense the immediate disease factor, but presumably rather of the nature of a compensatory function related to some less apparent ulterior cause The customary treatment consists in eliminating, as far as possible, such alleged etiologic factors of arteriosclerosis as can be associated with the individual under consideration The undue use of the various types of stimulants — alcohol, coffee, tobacco and the like — is prohibited Dietary indiscretions are avoided in so far as they are recognized, and various manifestations of neurasthenic temperament or nervous strain are subjected to such discipline as individual circumstances seem to dictate Much of this story has been repeated time after time, along with the prescription of mild forms of physical therapy of the most diverse types, such as baths, gentle exercise and massage

The immediate reason for referring to this subject again is to review a report of the management of a large series of cases of incipient arterial hypertension in which the careful regulation of the diet formed the most essential factor and seemed to be productive of beneficial results if one may judge by the index of blood-pressure measurement[1] The special feature of the treatment as it is conducted in one of the European sanatoriums consists in the restriction of meats, fluid intake, alcohol, salt and spices, and the encouragement of the use of fresh vegetables The physical methods take a secondary place in the regimen of the patients The comparative blandness of a diet devoid of the ordinary stimulating elements is in itself a help in controlling the excessive appetite that attends so many of the typical subjects It is, in fact, one of the salient features of a vegetarian regimen which is often prescribed for individuals who exhibit manifestations of hypertension Overeating is thus averted by means that seem less drastic to the patient than does the more direct proscription of favorite foods Attendant corpulence may be successfully reduced by the same procedure

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[2] Water Drinking with Meals editorial The Journal A M A Jan 13 1912, p 117

[1] Compare Hecht A Ueber die diätetische Beeinflussung pathologischer Blutdrucksteigerungen, Ztschr f klin Med 1912 lxxvi 87

The reduction in the intake of fluids, especially the limitation of large amounts of water so often taken with meals by persons accustomed to rapid eating and insufficient mastication of highly seasoned dishes, has repeatedly been demonstrated to result in a fall of blood-pressure from an unduly high level. Pronounced diminution in the amount of salt consumed leads to a similar result by decreasing the customary thirst associated with the excessive use of dietary adjuvants of this sort. Doubtless the ingestion of salt is enormously overdone in certain quarters and the habits of man in this respect are subject to striking variations. Combined with all these precautions is the advice to distribute the meals in a way that will avoid undue hunger or thirst at any time and thus prevent the consequent tendency to momentary errors or extravagances in eating.

The foregoing precautionary suggestions are in the main bits of wisdom self-evident to any one who appreciates at all the physiologic possibilities of rational dietotherapy. As yet however dietetics is far from receiving the consideration which is merited by its potent influence in certain types of disorders. Perhaps the assurances now available in a long series of published records will encourage a greater interest in the appropriate ordering of the diet along with other better appreciated curative and prophylactic measures when the earliest symptoms of arterial hypertension begin to manifest themselves.

INFANTILE BERIBERI

Among those who have little occasion to come into personal contact with the manifestations of beriberi this disease is customarily considered a malady of adults or adolescents. In the Far East where, because of its wide prevalence and serious inroads into the health of large communities, beriberi is now more effectively studied and controlled, the existence of what may properly be termed "infantile beriberi" has been recognized for some time. Two factors have of late directed particular attention to this manifestation in earlier life: the wide-spread interest and extensive investigation which beriberi has engaged everywhere, and the high death-rate among infants, particularly in the Philippines, where the subject of infant mortality has aroused considerable professional concern. Prior to the present correlation of beriberi with deficiencies in the diet, the interpretation of the symptoms in early life was under the dominance of the views then current respecting its etiology. Infantile beriberi, presumably identical with the sickness termed *taon, taol* or *suba* by the native laity, is common in children nursed by mothers suffering from beriberi. Accordingly one theory which was advanced to explain the rapid onset and severe character of the infantile manifestations attributed these to a toxin transmitted in the mother's milk.

Professor Andrews of the department of pathology in the University of the Philippines is engaged in a study of the facts bearing on infantile beriberi, and has pointed out some of the difficulties in its management which are attributable to conditions obtaining in the tropics.[1] His observations bring out clearly that the disease is not due to an infection or toxemia of either the mother or the child. All the evidence available is in complete harmony with the generally accepted view that beriberi is a nutritional disturbance. In fact, the special features which pertain to the infantile variety of the disorder, and particularly the conditions under which they arise, strengthen the current malnutrition hypothesis.

Actual analyses of the milk of mothers who are nursing sick children disclose no quantitative deficiencies in the mammary secretion so far as the familiar constituents are concerned. Infants improve rapidly after a change of diet — too rapidly to make it likely that the disease is due to bacteria in the milk. Highly significant is the fact that it was possible to produce in puppies incoordination and weakness of the extremities, degeneration of peripheral nerves, edema and anemia of the subcutaneous tissues — all symptomatic of infantile beriberi — by feeding the growing animals with the milk of mothers who had nursed affected children.

The unfailing correlation of the infantile disease with the corresponding illness of the mother lends effective significance to the conclusion that the mother's milk is probably deleterious because of what it lacks rather than because of any harmful constituent. Although occasionally the symptoms in the mother are not apparent at the time the disease manifestations appear in the suckling infant, they are likely to appear if the child continues nursing. The Manila investigator states that occasionally a mother is found showing symptoms of the disease while the child is apparently free, but on continued watching symptoms will be observed to appear in the infant. The history of the mother shows that invariably her diet consists of polished rice and fish or meat, rarely of a vegetable or any fruit. The mortality statistics indicate that infantile beriberi is more prevalent in the wet season in the Philippines. The probable explanation rests in the fact that fresh vegetables and fruits are scarcer at this time, prices go up with a consequent shutting off of the supply to those poorer classes who particularly require these products.

Inasmuch as the incidence of infantile beriberi is associated with the quality of the mother's milk, and as artificial feeding is not a possibility under the circumstances which prevail at present, attention must be centered on the corrective nutrition of the mother. Professor Andrews has *pointed out clearly that the* improvement of the physical condition of the Filipino mother and of the quality of her milk is a most important economic question. Half of the deaths among Filipinos in Manila are of infants during their first year of life. Fifty per cent. of these are due to infantile beriberi. Time after time, it is stated, a mother has had five or six children, all of whom have died of this disease. The incidence of death here is the more striking because in more advanced populations it is precisely among breast-fed infants that the mortality is relatively small, whereas in Manila 75 per cent. of the deaths of infants have occurred among the breast-fed.

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[1] Andrews, Vernon L.: Infantile Beriberi, Philippine Jour. Sc., Sec. B, The Philippine Jour. Trop. Med., 1912, vii, 67.

How to bring about reform and relieve such a situation needs to be seriously debated. Andrews suggests that as a prophylactic measure the dealers handling rice should be required to keep on hand the undermilled variety, and that a campaign of education should be carried on for the purpose of enlightening the poorer classes, especially the pregnant women among them.

TRACHOMA IN THE UNITED STATES

Trachoma is supposedly a disease of oriental origin. Passages have been found in ancient Greek and Egyptian writings which presumably refer to it. From Asia it is supposed to have extended into Northern Africa and later into Europe. The disease is to be found at present in all parts of Europe, but particularly in certain parts of Russia and Poland, in Galicia, Austria-Hungary, in Italy and in Greece. In the two countries last named, it has been of common occurrence for some time. Prior to 1897 various observers had invited attention to the increasing prevalence of trachoma in the United States, cases were frequently met in our cities, and outbreaks of the disease, especially among schoolchildren, had been occasionally reported. The incidence of the disease seemed to be limited largely to the alien population and recently arrived immigrants. As a large proportion of the immigrants coming to this country are from the localities in southern Europe where the disease is common, in 1897, for purposes of immigrant inspection, trachoma was classed among the dangerous, contagious diseases, with the result that the finding of this affection in an arriving alien makes mandatory his deportation under the immigration laws.

For some time it has been known that trachoma was present to a considerable extent among our Indians. Clark of the United States Public Health Service during the past summer found many cases on the reservations in Minnesota. These findings were deemed by the Minnesota State Board of Health to be of sufficient importance from a sanitary point of view to warrant the board in giving the matter the most careful consideration with a view to formulating plans for preventing the spread of the infection. Such action was clearly indicated for the protection of the commonwealth, trachoma being a communicable disease, mutilating in its effect, reducing markedly the efficiency of those affected, and, unless properly treated, ending frequently in blindness.

Recently McMullen,[1] also of the Public Health Service, in an investigation of the *prevalence of trachoma in* eastern Kentucky, undertaken at the request of the Kentucky State Board of Health, found a most unlooked-for and surprising condition. McMullen carried on his survey in the mountain districts in Knott, Perry, Leslie, Breathitt, Lee and Owsley counties, and in the blue-grass country in Clark County. He examined in all 3,974 people, of whom 500, or approximately 12.5 per cent., were found to have trachoma. Of those examined, 2,796 were schoolchildren from the mountain counties, and of these 338, or approximately 12 per cent., had the disease. In Clark County, on the other hand, which is in the blue-grass country, and in which living conditions are quite different from those in the mountains, only fifteen cases of trachoma were found among 436 schoolchildren examined.

The conditions found in Knott County may be taken as typical of those existing in the mountain counties. In this county twelve schools were visited and 659 schoolchildren examined. Of these, 119, or more than 18 per cent., had trachoma. Outside of the schools 400 people were examined and 102 cases of trachoma found. McMullen explains, however, that among these 400 examined were many who had come for examination because of sore eyes, and for this reason the 102 cases among 400 examined constitute undoubtedly a higher morbidity-rate than exists generally. In this county a total of 1,059 people were examined and 221, or approximately 20 per cent., were found to be affected with the disease, and McMullen estimates that between 8 and 10 per cent. of the entire population are suffering from trachoma. Similar conditions were found in the other mountain counties. The population of this region consists largely of people of small means, descended from Anglo-Saxon stock, who have lived in the locality for several generations. Most of them live in simple, small cabins, and the country is sparsely settled. According to McMullen, these cabins often consist of but one room in which the entire family, numbering frequently from ten to fifteen, and averaging about eight, sleep. Usually all members of the family use one towel, which is made to serve for a number of days before being relaundered. The cabins usually have insufficient window space, many of them having but one small window, and some of them none at all. McMullen states that the source of the original infection among these people is obscure, but that the disease has been among them beyond the recollection of the oldest inhabitants.

The finding of a communicable disease of the nature of trachoma so prevalent in a community places it among the commonwealth's important public health problems. A locality cannot continue heavily infected with such a disease without constituting a serious menace to neighboring uninfected localities and to localities even more remote. It is probable, however, that the conditions found in Kentucky do not exist in that state alone, but that investigation would show similar conditions present in the contiguous mountain regions of West Virginia, Virginia, Tennessee and North Carolina. McMullen suggests that measures to remedy the condition should be directed toward the prevention of the spread of the disease and the treatment of existing cases. At best, however, the problem is one that will take some time to bring to a satisfactory solution. It will require the utmost efforts of the authorities, assisted by the cooperation of the people.

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[1] McMullen, John: Trachoma in Kentucky, Pub. Health Rep., Nov. 8, 1912, p. 1815.

Current Comment

MONGOLIAN BIRTH MARKS—THE "BLUE SPOT"

Recently Wigglesworth[1] has noted that the Navajo Indian babe invariably has a "blue spot" over the sacrum. A blue spot in this location was first mentioned by Bealz,[2] who found it in Chinese, Japanese, Malays and Koreans. Fink[3] saw such patches in the Burmese, and Castor[4] in a discussion of Fink's work, corroborates his statements and concludes that the spots are atavistic. The pigmented patches over the sacrum vary in size from a quarter-dollar to a hand's breadth and superficially they resemble closely the bruises received from a fall. They may disappear within the first few years of life, but may be present in later years. Fink found them in 94.7 per cent. of Malay children. They are not nevoid in type but purely pigmentary. These spots bear no relation to abortive types of spina bifida, although they have been associated in isolated cases with this disorder. In some cases when the mother was of Mongolian type the spots were present with certain other Mongolian characteristics, such as the third eyelid. Consiglio has found such blue patches on about 2 per cent. of children in northern Italy and believes them to be attributes inherited from ancient Mongolian ancestors. Wigglesworth states that the Navajo Indians are supposed to have migrated from Asia, and by language tests ethnologists have been able to trace them as far as Alaska. The value of the spots as a mark of identification is not determined. Bruch,[5] who studied the occurrence of the mark in Tunis, Africa, found it quite common among the children there but only in brunette types. He states also that the blue spot has been noted in Europeans, but very rarely. Other observers also assert that the spot is not peculiar to Mongolian races. Apes and monkeys are said to have it constantly and throughout life. Possibly the blue spot might be found in negro babies if examined soon enough after birth before the skin becomes too dark, as suggested by Bruch. Evidently further and more extended observations are necessary in order to determine definitely whether the spot is to be given any special significance.

TRANSPLANTATION OF DURA MATER

Observations which have lately been made in the Physiologic Institute of the University at Vienna suggest the possibility of employing the dura mater successfully in surgical technic, for the purposes of homoioplastic and heteroplastic transplantation. The strength, elasticity and texture of the dura from various regions of the nervous system of man and higher animals have been measured with satisfactory assurance of the qualities which are a desideratum for the specific practical uses noted.[1] There are differences in the thickness of the membranes of different species, and the variations appear to be correlated with unlike degrees of development in the parts of the cerebrospinal nervous system. Boiling with water is detrimental to the make-up of the dura, but it can be preserved satisfactorily by fixation in formaldehyd solution and alcohol without serious detriment to those textural qualities which make it suitable for sterile implantation. It has been suggested that the product is especially adapted for replacement in defects of the dura. The resistance of the material to absorption gives it an added virtue for such purposes.

EXPERIMENTAL RHEUMATIC MYOCARDITIS

Among the lesions more or less characteristic of articular rheumatism are the nodules in the myocardium first observed by Romberg and by Bret, and studied more fully by Aschoff, Coombs, Fraenkel and others. Briefly, it concerns minute, discrete foci of embryonal cells and leukocytes that arise especially about the smaller vessels of the heart muscle. They appear to occur most commonly in the subendocardial parts of the septum, and in time they may change into scars. Fraenkel[2] found them in seventeen or twenty cases with a history of rheumatism, failing to find them in other infectious diseases he concluded that they occurred only in genuine rheumatism, although not necessarily in every case. It is interesting to note that Fraenkel doubted the streptococcal nature of rheumatism because streptococci, though reproducing the picture of rheumatism in rabbits, had not been shown up to the time of his writing to cause myocardial nodules in this animal. In view of the fact that his own observations indicated that the myocardial nodules may not occur in all cases of rheumatism it might be questioned whether their absence in rabbits injected with streptococci should be entitled to such significance. Recently, however, it has been demonstrated by Wächter, by Bracht and Wächter, and by Leila Jackson[3] that the injection of rabbits with streptococci from various sources does produce focal myocardial lesions similar to those found in the human heart in articular rheumatism. The streptococci used by Jackson in her experiments were obtained from the various forms of streptococcus infection of the milk epidemic in Chicago last winter and in Boston the year before. In these epidemics joint involvements were not infrequent, more or less typical cases of acute rheumatism occurred, and in many of the rabbits injected with the streptococci, arthritis also developed While it would be desirable to repeat the experiments with strains of streptococci from typical cases of articular rheumatism[3] the results already obtained, especially those by Jackson in which distinctively rheumatic myocardial foci were produced, support the view that streptococci cause acute rheumatic fever, or at least play a definite part in the process

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[1] The Blue Spot in the Sacral Region, Queries and Minor Notes Department, The Journal A. M. A., Nov. 9, 1912, p. 1734.
[2] Bealz: Races of East Africa, 1911.
[3] Fink, Lawrence G.: Mongolian Birth Marks, Jour. Trop. Med., 1912, xv, 227.
[4] Castor, R. H.: Pigmented Maculae on the Body, Jour. Trop. Med., 1912, xv, 307.
[5] Bruch: Arch. de méd. d. enf., 1912, xv, No. 6.

[1] Compare Butzengeiger, O.: Vergleichende Untersuchungen über die Dura mater des Menschen und der Säugetiere, Zentralbl. f. Physiol., 1912, xxvi, 437.
[2] Rheumatic Carditis, editorial, The Journal A. M. A., May 4, 1912, p. 1376.
[3] Jackson, Leila: Experimental "Rheumatic Carditis, Jour. Infect. Dis., 1912, xi, 243.

THE POTENCY OF THYROID GLAND PREPARATIONS

The therapeutic efficiency of preparations of the thyroid gland has of late been correlated with the iodin complex present in the gland No other iodin-bearing compound, either organic or inorganic, seems to exhibit quite the same degree of potency in those cases in which the peculiar and characteristic influence of thyroid medication is to be evoked Iodids and organic iodin compounds are widely used for certain therapeutic effects not directly related to the glands here in question It is not to these applications that we refer, but rather to the effects associated with organotherapy The products available in the form of desiccated thyroid are derived from several of the slaughter-house animals notably sheep and the preparations sold are now frequently "standardized" in terms of their content of iodin A recent examination of glands from animals in the Chicago stock-yards[1] showed with reference to size relations that the small glands of all the animals studied — sheep, beef, hogs — usually contain the most iodin With respect to the species, the glands of hogs are uniformly richest in iodin so that their selection for therapeutic purposes appears decidedly rational It would be advisable, however, to learn the influence of the previous diet of stock-yard animals on the iodin content of the thyroids, and to have data derived under a wider range of feeding, before the comparative merits of the three species mentioned are brought into too bold contrast At least there is no occasion at present to reject the hog products

Medical News

ARIZONA

New Society—The Greenlee County Medical Society was organized October 19 with a charter membership of fourteen Dr A M Tuthill Morenci, president, Dr E R McPheeters, Clifton, vice president Dr Edward N Reed, Clifton, secretary and Dr L A W Burtch, Clifton, Treasurer

New Hospitals—Ground was broken November 5 at Safford for the Arizona Sanatorium which is to cost about $125 000 ——The new administration building of the Arizona State Insane Hospital, Phoenix, a two story and basement building of concrete and brick construction, fire proof and offering accommodation for the executive officers and living quarters for the superintendent, has been turned over to the state

Personal—Dr and Mrs Francis H Redewill, Phoenix, have returned after a ten thousand mile automobile trip ——Dr H K Beauchamp, Phoenix, formerly superintendent of the Arizona Asylum for the Insane, has returned after a sojourn for six months in the East ——Dr Warren E Day has resigned as house physician to the Pioneers' Home, Prescott ——Dr F W Randall, health officer of Douglas, has been appointed registrar of vital statistics

ARKANSAS

New Officers—Arkansas Medical Association (colored) annual meeting, in Little Rock president, Dr J G Thornton, secretary, Dr G W Ish, both of Little Rock Hot Springs was selected as the next place of meeting

Personal—The residence of Dr J C Land, Walnut Ridge, was burned October 31 with a loss of about $5,000 ——Dr Charles S Holt, Fort Smith, has been appointed division surgeon of the Missouri Pacific Iron Mountain Railway, his district extending from Van Buren, Ark., to Coffeyville, Kan, and including the Greenwood branch Dr Phillips has been appointed local surgeon of the road at Van Buren vice Dr Edward C Wittwer, resigned ——Dr W H Blankenship, Pine Bluff, was painfully injured in a collision between his buggy and an automobile, October 1 ——Dr C B Paddock, Fayetteville, sustained severe bruises of the head and neck by the overturning of his automobile, recently ——Dr James L Dibrell has been appointed a member of the State Board of Charities, vice Dr Edward R Dibrell, deceased ——Dr Gaston A Hebert, Hot Springs, has been elected by the council, president of the Arkansas Medical Society, vice Dr E R Dibrell, Little Rock, deceased

CALIFORNIA

Psychopathic Ward for County Hospital—Architects have been asked to submit plans for a new psychopathic ward at the Los Angeles County Hospital

Medical Building for San Diego—Plans have been made for an eight story, concrete, reinforced office building designed especially for the use of physicians and dentists

Leper Returned to Hawaii.—A Hawaiian mess attendant on the battleship *Connecticut*, found to be suffering from leprosy, was transported across the continent and is being held in a tent near the Mare Island Navy Yard Hospital awaiting transportation to the leper colony at Molokai

Health City for Los Angeles County—Los Angeles County is planning to establish a county health city in the mountains, consisting of fresh air cottages where tuberculosis patients now being cared for at the county hospital, may have better chances for recovery and health The county plans to spend about $75,000 on this project

Personal—Prof Arthur Schattenfroh of the chair of hygiene in the University of Vienna, who is making an inspection of municipal sanitation in the United States, visited Los Angeles recently, and was the guest of the health commissioner, Dr L M Powers ——Dr P G Cotter, Los Angeles, had several ribs broken and was otherwise seriously injured in a collision between his automobile and a trolley car, November 4 ——Dr K C Gummess, Los Angeles, was attacked by four hold up men November 4 and robbed of his valuables and most of his clothing ——Dr Elizabeth F Kearney, Los Angeles, has returned from abroad ——Dr Charles Lincoln Edwards has been appointed professor of embryology and histology in the Medical Department of the University of Southern California, Los Angeles, and has been made director of the department of nature study in the Los Angeles public schools

COLORADO

New Sanatorium for Denver—A sanatorium of national scope is planned to be erected near Denver under the auspices of the Roman Catholic Church for the benefit of the people of that faith suffering from tuberculosis

Personal—Dr Allison Brown, Denver, has been appointed acting assistant surgeon in the U S P H Service with station at Fort Stanton, N Mex ——Dr R C Montgomery, Meeker, was painfully injured by the overturning of his automobile ——Dr H E Abrahams, Trinidad, was seriously injured by a fall from a twenty five foot ledge while deer hunting in the Chaquaque country ——Dr Mary Arnett, formerly of Boulder, has started from Honolulu on a trip around the world ——Dr Carroll E Edson Denver, has been appointed a member of the Public Library Board ——Dr Wilbur Lowe, Denver, was operated on for appendicitis in Mercy Hospital, November 2 ——Dr J Ed Ray, Sugar City, who has been seriously ill in St Mary s Hospital, Pueblo, is reported to be slowly improving

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[3] This has just been done by Coombs Miller and Kettle (Lancet 1912 clxxxiii 1209) and with the same results apparently as Jackson

[1] Aldrich T B The Iodin Content of the Small Medium and Large Thyroid Glands of Sheep Beef and Hogs Am Jour Physiol, 1912 xxxi 125

ILLINOIS

Site for Sanatorium Donated—The president of the Board of Commissioners of Cook County has donated to the county twenty five acres of land joining the Oak Forest Infirmary, to be used as the site for a county tuberculosis sanatorium

Personal—Dr J R Rigg, Mount Pulaski, fell into a cellar recently and fractured a rib ——Dr William E Rice, Tuscola, has been elected coroner of Douglas County ——Dr W B Hughie has succeeded Dr George M Peairs as surgeon of the Illinois Steel Company at Joliet ——Dr Edward H Lane, French Village, was seriously burned by the explosion of a gasoline lamp, November 13 and is a patient in St Vincent's Hospital, Belleville

Chicago

Personal—Dr Charles Porter Small, who has been physician of the University of Chicago since its founding, has resigned ——Dr Arthur D Bevan was painfully injured in a collision between his automobile and a cab, November 20

Consulting Staff for Coroner—Coroner Peter M Hoffman of Cook County has named the following as members of his consulting staff Drs John H Long, Walter S Haines, Ludvig Hektoen and John A Wesener and Chief Justice Harry Olsen of the Municipal Court By the aid of this consulting staff and the establishment of a chemical laboratory the coroner hopes to reduce the number of fatalities from poison which annually swell the list of deaths registered as "suspicious" requiring investigation by the coroner

INDIANA

New Officers—Union District Medical Society at Rushville, October 24 president Dr James E Morris Liberty, secretary, Dr David W Stevenson, Richmond

Small Pox.—Small pox is said to have existed in Jasonville for more than six weeks and to have been carried to Worthington from that place Dr J N Hurty health commissioner, visited these cities November 15 to investigate and direct measures for the suppression of the epidemic

Personal—Dr W A. Gekler has been appointed superintendent of the State Tuberculosis Sanatorium, Rockville ——Dr A W Brown has been elected superintendent of the Bluffton Branch of the Indiana Association for the Study and Prevention of Tuberculosis ——Dr A L Spinning Covington, has been appointed city health officer, vice Dr J R Hicks ——Dr John M Cunningham has succeeded Dr E B Mumford as inspector of contagious diseases for the Indianapolis Board of Health ——Dr John A Axline, Noblesville has retired after thirty nine years of practice ——Drs George W McCaskey, Miles F Porter, B P Weaver and Miles F Porter, Jr, have secured offices and laboratories in the Physicians' Defense Building, Fort Wayne ——Dr W W Barnett, For Wayne, announces that he is going to Cuba for a visit of four to six weeks ——Dr Samuel Hollis, Hartford City, has been elected president and Dr James A. Taylor Montpelier, a vice president of the Blackford County Association for the Study and Prevention of Tuberculosis ——Dr H H Martin, Laporte, has returned from Europe ——Dr M C Wilson has succeeded Dr Frank S Crockett, resigned, as meat and milk inspector of La Fayette

KENTUCKY

New Officers—Hardin County Medical Society, at Elizabethtown November 14 president, Dr H R Nusz Cecelian secretary treasurer, Dr E J Strickler, Elizabethtown

Small Pox Decreasing—The epidemic of small pox which has been prevalent in Sebrie for the past six weeks is subsiding, and about half of the patients who had been placed in quarantine have been released

Prison Farm for Tuberculosis—The Board of Prison Commissioners hopes in the near future to establish a state farm where prisoners suffering from tuberculosis may live in the open air and have a chance for their lives At Eddyville a new hospital has just been completed and arrangements have been made for a tent colony on the roof where prisoners suffering from the disease may live either in tents or in the open air, and thus far the experiment has been satisfactory

Hookworm Disease in Kentucky—It has been reported to the State Board of Health that since December, 1911 the state inspectors have treated 5 025 persons suffering from hookworm disease, and that 4,058 have been treated during the quarter ended Sept 30, 1912 Under the joint auspices of the Rockefeller Commission for the Eradication of Hookworm, the Kentucky State Board of Health the Jefferson County Board of Health and the Fiscal Court of Jefferson County, a series of illustrated lectures will be given at different towns in Jefferson County by Dr W W Richmond, Clinton, who is associated with the Rockefeller Commission Dr B W Smock Louisville, county health officer of Jefferson County will accompany Dr Richmond During the Child Welfare Exhibit in Louisville this week, Dr Richmond delivered a lecture at the Armory, November 25

LOUISIANA

New Officers—St Tammany Parish Medical Society, organized at Covington, October 30 president, Dr H E Gautreaux, Covington, secretary, Dr H D Bullock, Folsom

Needs of Dispensary—Pleas have been made to the New Orleans city council for an appropriation of $5 000 for the New Orleans Dispensary, of $15,000 for the Touro Shakespeare Alms House and of $15,000 for the Society for the Prevention of Cruelty to Children

Hospital and Infirmary Notes—The Touro Infirmary, New Orleans, has asked the city council for an increase of $4 000 in its appropriation, as in its charitable work the institution has contracted debts amounting to $21 000 ——The new Crowley Sanitarium is now ready to receive patients The institution contains nineteen ward rooms and two private suites operating rooms, reception rooms, etc ——Tulane University is equipping a modern emergency hospital on the campus to provide for any case of illness or emergency which may arise among the students The building will accommodate eight patients

For the Betterment of the Medical Corps.—The adjutant general of Louisiana has completely reorganized the medical and hospital corps of the National Guard of the state along the lines suggested by the War Department It is now divided into a medical corps, medical reserve corps and hospital corps all commanded by a chief surgeon who is subordinate only to the commander in chief of the National Guard The medical corps consists of medical officers commissioned after examination by a board consisting of not less than three medical officers of the National Guard The Medical Reserve Corps is to consist of duly qualified practitioners recommended by the chief surgeon

MARYLAND

Baltimore

Personal—Dr J A. F Pfeiffer has returned from Europe ——Dr A D McConachie has resigned from the faculty of the Maryland Medical College

School for Defectives Established—With the approval of the school board and the cooperation of Dr Adolf Meyer, head of the Phipps psychiatric clinic a class for children of defective mentality will be established at one of the public schools

Home for Invalid Children Opened—The Harriett Lane Johnson Home for Invalid Children was opened November 22 The principal address was made by Dr L Emmett Holt New York City, and Drs Abraham Jacobi and William H Welch Baltimore, also spoke

Bazaar for Widows and Orphans—The bazaar for the benefit of the Home for Widows and Orphans of Physicians was held in the Howard Street Armory, November 21 25 Mrs Eugene F Cordell was in charge and a number of the wives and daughters of Maryland physicians assisted The management hopes that enough money will be realized to pay off the balance of the indebtedness on the building, and also to secure a substantial sum for the maintenance of this home, the only one of its kind in existence

MICHIGAN

New Officers—Grand Traverse Leelanau County Medical Society, at Traverse City, November 4 president Dr F Holdsworth, secretary treasurer, Dr James V J Hall, both of Traverse City ——Tuscola County Medical Society at Caro, October 14 president, Dr J H MacKenzie, Reese secretary treasurer, Dr W C Carvin, Millington (reelected) ——Pontiac Medical Society at Pontiac, October 15 president Dr C W Mack, secretary, Dr I A Farnham ——Michigan State Association for the Prevention and Relief of Tuberculosis at Ann Arbor, November 1 president, Dr Herman Ostrander Kalamazoo treasurer, Dr H J Hartz Detroit ——Lenawee County Antituberculosis Society, at Adrian president Dr A W Chase, secretary treasurer, Dr I sh Morden both of Adrian ——Twin City Physicians' Club (Hancock and Houghton) at Hancock November 11 president Dr J C Turner, Houghton, secretary Dr M D Roberts Hancock ——Tri County Medical Society at Cadillac, November 7 president, Dr S C Moore, secretary treasurer, Dr Rudolph J F Odlan, both of Cadillac.

Personal—Dr O M Vaughan, Covert, has been unanimously elected president of the board of superintendents of the poor for Van Buren County, for a sixth three year term ——Dr H S Kiskadden, Detroit, fractured his arm in a machinery accident, October 23, and was operated on in Grace Hospital, Detroit, five days later ——Dr I Lindgren, Ishpeming, has started for his old home in Helsingfors, Finland ——Dr W H Price, Detroit, was elected second vice president of the National Milk Inspectors' Association at its annual meeting in Milwaukee last month ——Dr S Szudrawski, Manistee, has been appointed state medical inspector for the northern half of the ninth congressional district ——Dr Charles W Thompson, assistant superintendent of the Newberry State Hospital, has resigned ——Dr Glenn W Stockwell has succeeded Dr Benjamin P Brodie as surgeon of the Detroit Fire Department ——Dr G B Hoops Detroit, underwent an operation for appendicitis in Grace Hospital, recently ——Dr Joseph E Bennett, Wayne, while hunting in the Upper Peninsula, November 10, was accidentally shot fracturing his right femur just above the knee ——Dr James B Bradley, Eaton Rapids, has resigned as a member of the Prison Pardon Board to take effect January 1 ——Dr H. T Setheny, Menominee, was operated on in St Joseph's Hospital in that city, for the removal of gall stones, November 11

MISSISSIPPI

New Officers—Tate County Medical Society at Arkabutla, October 2 president, Dr H L Murphy, Arkabutla, secretary, Dr J S Eason, Coldwater

Personal.—Dr J Sidney Sharp, Grenada, has been appointed a member of the State Board of Health, vice Dr J C Armstrong, Water Valley, resigned ——Dr R M Saddler, Okolona, who had a cerebral hemorrhage several weeks ago, is reported to be improved, and has resumed practice ——Dr H N Stephen, Biloxi has accepted a position as surgeon on steamers sailing from New Orleans to the tropics ——Dr David A Spear has returned from abroad and has settled in Greenville ——The Newton Sanatorium, which was bought two years ago by Dr J T B Berry has been sold to Drs I W Cooper and W G Gill ——Dr J E Wallace, Biloxi, who has been ill with influenza has recovered and resumed practice ——Dr J A Rowan, Wesson, suffered a cerebral hemorrhage, November 2

MISSOURI

Personal—Dr W C Guss, Hannibal, who has been ill with pneumonia, has started for Florida ——Dr H G Dallas, Fulton, fractured his left leg in an automobile accident near Fulton, November 13, and Dr Dennis E Singleton sustained a strain of the back in the same accident ——Dr John E Bruere, formerly of St Charles, is reported to be seriously ill in New York City ——Dr Max Goldman, Kansas City, was attacked in his office by a patient, November 9, but succeeded in overpowering his assailant

Operations on Physicians—Dr James R Mudd, formerly of St Charles, who was operated on October 26 in the Deaconess Hospital St Louis is reported to be convalescent —— Dr John Bryant Independence was operated on in Johns Hopkins Hospital Baltimore recently ——Dr George P Pipkin, formerly superintendent of the Kansas City General Hospital, underwent operation for appendicitis, October 9 ——Dr Solomon Steward, Trenton was recently operated on and is reported to be making a good recovery ——Dr A I Nichols Ashland, was operated on in Columbus, recently, for a tumor of the right arm

St Louis

Personal—Dr Samuel T Nicholson has been appointed superintendent of the Sydenham Municipal Hospital for Infectious Diseases, Baltimore, vice Dr Joseph A Wright, resigned ——Dr John B Shapleigh has resigned as a member of the Hospital Board ——Dr Le Grande Atwood celebrated his eightieth birthday anniversary, October 16 ——Dr R. B H. Gradwohl has returned from Europe

Hospital News—The new building of the St Louis Maternity Hospital was dedicated with formal ceremonies, October 29 ——The country branch of the St Louis Children's Free Hospital will be established this month at Ridge Farm The institution will occupy temporarily the three buildings now used by the Grand Leader Country Club, and it is expected that next year a fireproof hospital building will be erected.

Visiting Staff Selected.—The hospital board has appointed the following visiting staff for the City Hospital and other institutions under its jurisdiction Of these, forty five are reappointments of old members of the staff medical division, O H Campbell, L S Luton, George C Crandall, L J Wilfort, C J Luyties, P George Richter, C H Neilson, H J Cummings, O H Brown, William Engelbach, Llewellyn Sale, John C Salter, W P Elmer and Edward H Eyermann, surgical division, A C Leggat, Willis Young, Ernst Jonas, Max W Myer, Francis Reder, Frederick Bailey, M G Seelig, E A Babler, William E Leighton, Louis Rassieur, O H Elbrecht, Robert E Schlueter and W C G Kirchner, former superintendent of the City Hospital, gynecologic and obstetric division, A N Curtis, George Gellhorn, Hugo Ehrenfest, P H Swahlen and F J Taussig, observation and neurologic division, C G Chaddock, M W Hoge, H Unterberg, W W Graves, S I Schwab and Percy J Farmer, genito urinary division, C E Burford, W M Robertson, H J Scherck H G Lund and J W Marchildon, eye division, J E Jennings, Ernst Saxl Meyer Wiener, Max Jacobs and A Collasowitz, ear, nose and throat division, W D Black, C F Pfingsten R Ph Scholz, H W Loeb and W M C Bryan, pediatric division, G Lippmann, Julius Rotteck, J R Clemens and T L Rives, orthopedic division, Alexander E Horwitz and Scott Parsons, dermatologic division, W H Mook, Joseph Grindon and J J Houwink, dental division, J P Harper, Virgil Loeb and William Oliver Appel

NEW YORK

Memorial Hospital Opened—The new Higgins Memorial Hospital, Olean, erected in memory of the late Gov Frank Wayland Higgins, by his sister at a cost of $50,000, was formally dedicated November 1

Academy Delegation Calls on Old Member—Dr Alfred Mercer *dean of the medical profession of Syracuse, received the* congratulations and good wishes of a delegation representing the Syracuse Academy of Medicine, November 14, on the occasion of his ninety second birthday anniversary

New Officers—Columbia County Medical Society, one hundred and fourth annual meeting at Hudson, October 29 president, Dr E C Niser, Hillsdale, secretary treasurer, Dr H. W Johnson, Hudson ——Niagara County Medical Society in Lockport, November 12 president, Dr Carl G Leo Wolf, Niagara Falls, secretary, Dr L R Hulbert, Lockport

No Tuberculosis Hospital for Yorktown.—The State Commissioner of Health has denied the application of the Westchester county board of supervisors for a tuberculosis hospital at Yorktown The refusal to grant the application was based on the objection of the New York City authorities on the ground that the establishment of such an institution would be a source of possible contamination to the water supply of the city

Personal—Dr Robert B Hammond White Plains, has been appointed a commissioner in lunacy ——Dr L M Andrews Warsaw, has been appointed physician to the Wyoming County jail ——Dr J Glenn Ernest, Lockport, has been elected coroner of Niagara County ——Dr Lucien Howe has been elected secretary and Drs Roswell Park and John B Coakley have been reelected trustees of the Buffalo Eye and Ear Infirmary —— Dr H B Pritchard, Syracuse, was caught between two automobiles and painfully injured, November 6

State Supervision of Dairies—A bill has been prepared for presentation at the approaching session of the legislature which will make the supervision of the milk supply at the dairy obligatory on the state instead of on the city as at present The New York Milk Committee which has prepared the bill believes that the licensing and inspection of dairies creameries and milk shipping stations should be done by the State Board of Health and that the State Department of Agriculture should control the health of dairy cattle and the sanitary conditions of the barns, etc , and the methods of milk production, while the city health department should test and inspect the milk when received

New York City

New Officers—New York Academy of Medicine, November 7 president, Dr William M Polk, secretary, Dr C F Adams

Personal—Dr Bernard Samuels has returned from Europe. ——Dr Lewis S Pilcher, Brooklyn, has been elected commander of U S Grant Post, G A R

Receipts for Hospitals—The treasurer of the Hospital Saturday and Sunday Association reported on November 12 that *the total collections for the year amounted to* $110,940

Small Pox on Steamer—The steamer *Barbarossa,* which arrived from Bremen, November 14, was detained at quarantine on account of a case of small pox among the passengers

Physicians in Realty Deal—A New York corporation said to be composed of one hundred physicians has purchased a farm of seventy acres known as Summit View near Armonk for about $30,000

Jewish Consumptive's Relief Society—The eighth annual meeting of this association was held November 15 to 19 Dr Abraham Jacobi delivered the principal address at the evening session of November 15 The society has a membership of 25,000 and more than 200 delegates were present at the convention

Millions Needed for Health Work.—Dr Joseph J O'Connell, health officer for the Port of New York, announces that he will apply for an appropriation of $2,000,000 from the legislature to improve the port quarantine facilities, for the enlargement of Swinburne Island and the erection of additional buildings which will be rendered necessary by the opening of the Panama Canal

Hospital Notes—Foundation plans have been filed for the construction of a six story hospital for the Volunteers of America to be erected on the corner of Beekman and Water Streets It will be known as the Volunteer Hospital and will cost $60,000 ——Designs have been approved for a six story structure to be erected at 41 43 East One Hundred and Twenty Third Street as an annex to the Hospital for Deformities and Joint Diseases

Membership of the County Society—A letter recently sent out by the Medical Society of the county of New York states that the society has a membership of 2,476 and that there are 2,083 physicians in the county who are not members Of these at least 2,000 are eligible for membership The letter sets forth the benefits to be derived from membership in the county society and urges each member to do his utmost to recruit at least one new member

Lecture Course for Nurses—The Department of Health, in cooperation with the Nurses' Settlement, Teacher's College and the Charity Organization Society, has arranged for a series of lectures to be given by its officers and representatives of the above organizations on the activities and methods of the city in dealing with public health matters, home nursing, social service work and charitable aid Various divisions of the department will be presented each week

Anniversary Meeting—The New York Academy of Medicine held its anniversary meeting and reception November 21, on which occasion Dr Charles Dana and Dr Algernon T Bristow, Brooklyn, read papers on "The Doctor's Future" Dr Abraham Jacobi, in a short address, made a plea for the general practitioner, and expressed the hope that the general practitioner would be retained 'modified in a sense, but still a general practitioner, and the friend and confidant of his patients"

New Hospital for Harlem.—Plans for a new building for the Hospital for the Treatment of Deformities of the Bones and Joints have been filed and the construction will soon be begun The equipment that has been planned will be much more elaborate than that of any other institution for the treatment of similar conditions in the country A rather unique feature will be a factory in the basement for the manufacture of shoes and surgical instruments

Fight Against Poisonous Matches.—The Municipal Explosives Commission, which after a long fight secured the adoption of a city ordinance forbidding the use of phosphorus and 'after glow" matches after Jan 1, 1913, find that they must begin their fight over in order to prevent the so called 'match trust" from putting into effect some plan by which they will be enabled to continue the sale of these matches for two years or until the federal law forbidding the manufacture and sale of phosphorus matches goes into effect on Jan 1, 1915

New Hospital Association.—The delegates of twenty nine hospital dispensaries met recently at the New York Academy of Medicine and organized an association to be known as the Associated Out Patient Clinics of the City of New York The aims of the association are to coordinate the work of existing dispensaries and out patient clinics to eliminate unworthy applicants for treatment, to promote proper standards of treatment, economy and efficiency in dispensary management Efforts will be made to limit the work of each dispensary to the district in which it is located

Campaign Against Cocain Sellers Progressing—The results of the efforts to prevent the illegal sale of cocain made in Brooklyn during the past three months have just been placed before the grand jury of Kings County The report shows that there have been fifty four indictments of alleged sellers of cocain by the October grand jury, making a new high record in the prosecution of this particular felony The revelations as to the extent of the use of this drug were amazing It was shown that pedlers on street corners, who were ostensibly selling pencils and other small wares, were using these as a blind while they were in reality selling cocain The sections where this drug was most freely sold were upper Fulton Street and lower Tompkins Avenue

New York Prepared for Cholera—It is stated by Dr Joseph O Connell health officer of the port, that quarantine regulations and examinations of vessels which come from the Mediterranean, Hellenic or Levantine ports are to be much more rigorous in consequence of the reported outbreak of cholera in the Turkish army Improvements have been in progress for the past eight months with just such a contingency in view and equipment and accommodations have been so increased that passengers that may have to be removed from incoming vessels may be cared for without difficulty and without the danger which attended the last visitation of cholera to this port Dr O Connell expresses the belief that it is typhus fever rather than cholera that we should fear, as typhus is more likely to be brought in by carriers and because less is known about this disease than about cholera

NORTH DAKOTA

New Hospitals—A new hospital is to be erected at Jamestown to be known as the Parkview Hospital and Sanitarium Dr W A Gerrish *is one of the incorporators* ——The Dunseith Sanatorium for tuberculosis, recently completed, is in charge of Dr James P Widemeyer, Rolla

Personal—The offices of Drs W P Baldwin and H J Rowe, Casselton, were destroyed by fire, October 24 ——Dr K H Beach, Dickinson, has been appointed superintendent and chief surgeon of the new Northern Pacific Hospital, Glendive, Mont, and will assume his new duties about January 1 ——Dr John G Arenberg, Grand Forks, has returned from Europe ——By a fire in Mohall, November 16, Dr J Halliday lost his office, fixtures and furniture

PENNSYLVANIA

New Officers—Bucks County Medical Society at Doylestown, November 13 president, Dr Walter H. Brown, Richlandtown, secretary treasurer, Dr Anthony F Myers, Blooming Glen (reelected)

Portrait Presented—At the meeting of the Berks County Medical Society at Reading, November 12, an oil painting of the late Dr Peter G Pertolett was presented to the society by Dr Samuel L Kurtz

Hospital Items—The Wilkes Barre City Hospital Association has purchased a lot on which it will erect a three story building, adjacent to the present building ——October 29 and 30 were harvest home days at the Mid Valley Hospital, Scranton at which gifts of vegetables, fruit, etc, were made to the hospital ——Chester County Hospital has purchased a tract of land north of the present location of the buildings at a cost of $1 500

Personal.—Dr Donald G Rafferty, Pittsburgh, is a patient in Mercer Hospital, suffering from malaria said to have been contracted while on an exploration tour in Abyssinia ——Dr H E Williams, West Coatesville sustained painful injuries in a fall November 17 ——Dr H F Smith, Scranton, has been appointed first lieutenant, M C, N G Pa, and assigned to the Thirteenth Infantry, vice Dr F F Arndt, resigned ——Dr Davis A Hogue, Altoona, who has been seriously ill with septicemia is reported to be improving ——Dr George W Wagoner, Johnstown, has been elected secretary of the Board of Managers of the Conemaugh Valley Memorial Hospital ——Dr E W Smitheman, Oil City is reported to be critically ill at the home of his father in Haddonfield, N J ——Dr K H Van Normán, house surgeon at the Pittsburgh Tuberculosis Hospital, has been elected assistant superintendent of the Johns Hopkins Hospital, Baltimore ——Dr John W Luther has been elected first burgess of the new borough of Palmerton

Philadelphia

New Officers—Aid Association of the Philadelphia County Medical Society, November 11 president, Dr Roland G Curtin secretary, Dr Lewis H Adler, Jr

Personal—Dr John J Gilbride has been appointed lecturer in surgery in the Medico Chirurgical College of Philadelphia ——Dr Eva Rowley Frankford has been appointed pathologist on the staff of the Kalamazoo (Mich) State Hospital.

Hospital News—The managers of the Children's Hospital have decided to erect a group of buildings on a new site having double the capacity o [illegible] ent institution, [illegible] be provided with the [illegible] upment for [illegible] of children and the [illegible] on Eighteenth ground covering more than one and one half acres One of the managers of the hospital has given $100,000 for the purchase of the site

Money for Hospital in China.—Dr Josiah C McCracken, head of the medical school in Canton, China, established by the University of Pennsylvania Christian Association, has come to Philadelphia to raise $85,000 for the erection of a hospital in connection with the school One wing, 77 feet in length, was recently completed at a cost of $17,000 and is now being used to its fullest capacity It is proposed to add 112 feet to this wing and in addition, to build a central section which will contain executive offices, laboratories, private wards and operating room

Appropriation for Home for Indigents—On November 7, Councils Finance Committee recommended an appropriation of $10,000 for a temporary home for the female indigent on the Alexander Brown property, in Torresdale, the tract once selected for a permanent home for the poor Councils passed a bill providing for the reorganization of the divisions of house drainage and nuisances under one inspector to be known as the chief sanitary inspector Mayor Blankenburg recommended to Councils a creation of the position for superintendent of Byberry Farms for the insane at a salary of $4,000 a year Director Neff stated that a physician is now needed there to take charge of the insane patients

The Rush Society—This society, established through the initiative of the Medical Department of the University of Pennsylvania, was organized November 2 Its objects are similar to those of the Harvey Society of New York, namely the diffusion, by lectures, of knowledge concerning recent advances in medical and the biologic sciences and public hygiene Dr Richard M Pearce was elected president, Dr Alfred Stengel, vice president, and Dr William Pepper, secretary treasurer It proposes to present during each academic year from six to eight lectures, the first to be given in January Arrangements have already been made for lectures by Dr Theodore C Janeway Columbia University, New York City, and Dr M J Rosenau of Harvard

TEXAS

New Quarantine Station Planned—An additional building has been authorized for the United States Quarantine Station Group, Bolivar Roads, Galveston

New Officers—Fourth District Medical Society at Brownwood, October 21 22 president, Dr T K Proctor, San Angelo secretary, Dr J M. Horn, Brownwood Lampasas was selected as the next place of meeting——Nacogdoches County Medical Association organized at Nacogdoches, October 9 president Dr J H Barham, secretary, Dr T J Blackwell, both of Nacogdoches

Raising of Quarantines Delayed.—After conference with State Quarantine Officer Dr I L McGlasson, Galveston, and Dr Ralph Steiner president of the State Board of Health in Austin, October 30, it was decided that, on account of the prevalence of yellow fever in Mexico and South American countries the maritime quarantine, which has ordinarily been raised November 1, should be continued for at least thirty days after that time

Personal—The office of Dr Adam M Autrey, Houston, was seriously damaged by fire October 27——A board of health has been organized in Corpus Christi consisting of Drs T J Turpin, E O Arnold Herbert Caldwell, W E Carruth and Sherman T Dodge, with Dr P D Spohn acting city physician and Dr Roy Miller, sanitary commissioner as ex officio members——Dr Herbert E Stevenson El Paso, has been elected president of the local branch of the American National Red Cross——Dr M J Bliem has been elected president and Dr M L. Burnham vice president of the San Antonio Society of Social Hygiene.——The residence of Dr P H Chilton Comanche was burned to the ground October 5——Dr R. M Prather Beeville, who has been ill with septicemia, has recovered——Dr R W Knox, Houston, has returned from Europe ——Dr George T Baskett, San Angelo, has been appointed superintendent of the St Peter (Minn) State Hospital

GENERAL

Annual Conference on Labor Laws—The sixth annual meeting of the American Association for Labor Legislation will be held in Boston December 27 28 Among the topics to receive attention in the discussions are "protection against lead poisoning' and "occupational diseases"

New Hospital in Colombia.—The United Fruit Company is building a hospital at Santa Marta, Colombia South America at a cost of $100 000 The building will be one of the finest in Spanish America and will have a research department affiliated with the medical department of Tulane University, New Orleans

Anatomists to Meet—The twenty ninth annual session of the American Society of Anatomists will be held in the medical department of Western Reserve University, Cleveland, December 31 January 2, in affiliation with the American Society for the Advancement of Science, the Society of American Naturalists the American Society of Zoologists, the American Physiological Society and many other organizations

Life Insurance Directors to Meet—The mid winter meeting of the Medical Section of the American Life Convention will be held in Hot Springs, Ark , February 26 28, 1913, under the presidency of Dr H A Baker, Pittsburgh Dr Frank W Foxworthy, medical director of the Commercial Life Insurance Company and Majestic Life Assurance Company, Indianapolis, is chairman of the program and entertainment committee

Atlantic Coast Line Surgeons Meet.—At the eighth annual meeting of the surgeons of the Atlantic Coast Line Railroad held in Richmond, October 15 16, the following officers were elected president, Dr John S McEwan, Orlando, Fla , vice presidents, Drs S T Nicholson, Washington N C , C E Moore, Wilson, N C , and H B Mahood, North Emporia, Va , and secretary treasurer, Dr C P Aimar, Charleston, S C , (reelected)

Railway Hospital Turned Over to Employees—The Missouri Pacific Iron Mountain System has completed the formal transfer of the hospital property to its employees and officials, and has turned over cash amounting to nearly $200,000 and real estate and furnishings aggregating about $50,000 to the new management Dr P F Vasterling, St Louis, Mo , chief surgeon of the road, is ex officio chairman of the board, and its only medical member

Ohio Valley Association—At the fourteenth annual session of the Ohio Valley Medical Association held in Evansville, Ind , Nov 13 14, the following officers were elected president, Dr Henry R. Alburger, Indianapolis, vice presidents, Drs A D Willmoth, Louisville, E O Smith, Cincinnati, and G M Young, Evansville, and secretary treasurer Dr Benjamin L W Floyd, Evansville (reelected) The next meeting will be held in Evansville, in November, 1913

Railway Surgeons Elect—The New York and New England Association of Railway Surgeons held its twenty second annual session November 13, and elected the following officers president, Dr John W Le Seur, Batavia, N Y , vice presidents, Drs C A Pease, Burlington, Vt , and Dr William H Marcy Buffalo, N Y , corresponding secretary, Dr George Chaffee, Brooklyn, recording secretary, Dr J H Reid, Troy, N Y , treasurer, Dr J K Stockwell, Oswego, N Y

Annual Meeting of Tri-State Society—The nineteenth annual meeting of the Tri State Medical Society of Arkansas, Texas and Louisiana, was held in Shreveport, November 12 13 Texarkana was selected as the next place of meeting, and the following officers were elected president, Dr T B Younger, Fisher, La , vice presidents, for Louisiana, Dr John L Scales Shreveport, for Texas, Dr William G Hartt, Marshall, and for Arkansas, Dr George P Sanders, McNeil, secretary treasurer, Dr Jacob M Bodenheimer, Shreveport, La (reelected)

Medical Milk Commission Report—The Medical Milk Commission of Essex County, N J , has issued for distribution among physicians a pamphlet containing the twenty third report of the commission including the forms of certificates made by the chemist, the bacteriologist, the visiting physician, the veterinary surgeon, the visiting committee and other committees of the milk commission, an abstract from the by laws, the medical milk commission laws of New Jersey, a copy of the agreement between the milk commission and the producer of certified milk, and an abstract from the annual report of the State Board of Health of New Jersey, setting forth the effective manner in which an epidemic of scarlet fever was prevented by the prompt handling of some suspected cases that occurred among the employees of a certified milk dairy The report affords information of value to other medical milk commissions, as it is the actual working record of an efficiently conducted certified milk commission

Bequests and Donations.—The following bequests and donations have been announced

Children s Hospital Free Home for Consumptives, Perkins Institution for the Blind Boston Floating Hospital and Kindergarten for the Blind each one ninth of the estate of Charles John Prince Boston on the death of his wife

Presbyterian Hospital Chicago Visiting Nurses Association, each $5 000 Chicago Home for Incurables and Home for Destitute Crippled Children each $10 000 by the will of Miss May Buckingham

St Joseph s Hospital, Philadelphia, $12 500 by the will of Isabella McLinden

St. Mary's Free Hospital for Children, New York City Presbyterian Hospital Charity Organization Society New York Association for Improving the Condition of the Poor and Children's Aid Society each $10 000, by the will of William Hall Penfold

S R Smith Infirmary Thompkinsville, Staten Island the fund of $108 333 as the result of a campaign to raise $100 000 which was inaugurated October 18

Johns Hopkins Hospital Baltimore $200 000 the gift of James Buckingham Brady New York City for the erection of a six story building to be known as the James Buckingham Brady Institute containing laboratories and public wards for the study of urology in addition $15 000 annually for maintenance and a substantial sum by will Dr Hugh H Young is to have charge

The Journal of Pharmacology and Experimental Therapeutics—Within the brief period since its establishment about three years ago, the *Journal of Pharmacology and Experimental Therapeutics*, under the editorship of Prof John J Abel of the Johns Hopkins Medical School, has won a prominent place for itself among the publications which aim to present original contributions to the medical sciences Pharmacology pursued as a distinctive branch of study and encouraged as a field for research has a comparatively recent history in the United States The formation of a thriving society of active pharmacologic experimentalists and the launching of a new journal devoted exclusively to this field, all within recent years, give an indication of the interest which has been aroused in the rational study of the action of drugs and their therapeutic applications Few changes have come so rapidly in the evolution of medical studies in this country as has the transformation of the old materia medica of preceding generations into the scientific pharmacology of to day With the beginning of Volume 4, September, 1912, Prof Arthur R Cushny, the well known pharmacologist of University College, London, formerly at the University of Michigan, has become joint editor with his American colleague, Professor Abel At the same time Sir T Lauder Brunton, Dr H H Dale and Dr F Ransom of London, Sir Thomas Fraser of Edinburgh, Prof J T Cash of Aberdeen, Prof R Stockman of Glasgow, Prof J N Langley and W E Dixon of Cambridge, Prof C R. Marshall of the University of St Andrews and Dr J A. Gunn of Oxford joined the board of associate editors, which already includes the names of many of our foremost American workers in this field This new arrangement in the direction of editorial expansion on both sides of the Atlantic is likely to attract the best pharmacologic contributions of English speaking countries It cannot fail to enhance the prestige of the *Journal*, which already has a creditable record, and the science which it represents will reap the benefit that accrues from a forceful and critical medium of publication This felicitous cooperation of the ablest of British and American colleagues in the management of a scientific project betrays the spirit of the times It exemplifies the truly international character of work in science and medicine, in which the boundaries of states have become obliterated The new venture calls for a word of congratulation and deserves hearty support

THE SCHRANK CASE

The case of the would be assassin of Mr Roosevelt, John Schrank, was disposed of November 23 by the Municipal Court of Milwaukee County

We present below the summary and conclusions of the five alienists appointed by Municipal Judge A C Backus, as commissioners to examine Schrank and determine his mental state The questions on which the commissioners were instructed to report were 1 Is the defendant at the *present time* insane? 2 Is the defendant in such condition of mind that he is able to advise with counsel and conduct his defense?

It will be remembered that Schrank, when arrested, expressed the belief that Colonel Roosevelt had guilty knowledge of President McKinley's death and that "*a man who wanted a third term had no right to live*" His examination developed the fact that a whole body of systematized delusions had grown up in his mind about "sacred traditions" that must be defended with life if need be, and that Colonel Roosevelt, like Caesar, was ambitious and deserving of Caesar's fate

The summary and conclusions of the commissioners are as follows

Summary—'We have limited the scope of our investigation and inquiry to the questions we have been asked to determine and summarize briefly John Schrank, aged 36 years single, bar keeper and saloon keeper, and of limited educational opportunities, with insane heredity, was born in Bavaria, March 5 1876, and came to this country twelve years later Apparently he developed normally, but early in life showed a particular fondness for the study of the histories of this and other countries, and also for the composition of poetry In the course of his studies of history, and especially of the Constitution of the United States and of Washington's Farewell Address, he developed the belief that this republic is based on the foundation of four unwritten laws to which he also refers as the 'Four Sacred Traditions

'In 1901 he had a very vivid dream, which at that time he recognized as only a dream [of seeing McKinley in his coffin point to a person as his slayer who wore the aspect of Roosevelt] the memory of which has frequently recurred to him ever since In the course of the pre-convention campaign [in 1912] the belief that the four unwritten laws or the 'Four Sacred Traditions' are in danger comes to him, and later on the nomination of a presidential candidate by the Progressive Party, he begins to attach particular significance to the dream he had in 1901 He meditates deeply on this and, in the course of a few weeks, there appears to him a 'vision' accompanied by a voice which, in effect, commands the killing of the man through whose acts and machinations he believes the sacred traditions to be endangered, and who he also believes is, through a conspiracy, concerned in the assassination of a former president He continues to ponder on the subjects set forth awaiting the appearance of a person who would carry out the act suggested by the vision, but shortly arrives at the conclusion that he, and not someone else, is the chosen instrument He at once sets forth to accomplish his mission, following his victim until he finally comes up with him

During his examination as to his sanity, he conducts himself in perfect accord with his beliefs, and expresses a regret at not having died at the hands of the mob if such a result would have proved of benefit to his chosen country

Conclusions "1 John Schrank is suffering from insane delusions grandiose in character, and of the systematized variety

2 In our opinion he is insane at the present time

"3 On account of the connection existing between his delusions and the act with which he stands charged, we are of the opinion that he is unable to confer intelligently with counsel or to conduct his defense

"Richard Dewey, M D, Chairman
"W F Becker, M D, "D W Harrington, M D,
'Frank Studley, M D, 'William F Wegge, M.D,
'Commissioners"

In accordance with the finding of the commission, Judge Backus has ordered the commitment of Schrank to the Northern State Hospital for the Insane, near Oshkosh, Wis, and he was taken to the institution November 25

The noteworthy feature of these proceedings is the appointment of experts solely for the purpose of advising the court without reference either to prosecution or defense, thus avoiding the 'battle of experts' which rightly or wrongly often brings discredit on psychiatry

LONDON LETTER

(From Our Regular Correspondent)

London, Nov 16, 1912

The National Insurance Act Probable Rejection of the Government's Terms

The resolutions passed by the various divisions of the British Medical Association are so far, in the great majority of cases, in favor of rejecting the government's amended terms, which, as stated in my previous letter, are a considerable advance, as regards remuneration, on those previously offered, but do not grant many of the "six points" formulated by the association Perhaps the point on which the profession is most hostile is the failure to insert in the act the income limit of $10 a week for insured persons eligible for medical benefit The feeling is that contract practice is semi charitable and should be confined to persons in poor circumstances In the past it has been possible to take contract work at low rates because those a little higher in the social scale could be attended at moderate fees, which, though moderate enable the physician to pay his way In the act, the income limit is $15 a week for all persons except those who are manual workers, for whom there is no limit whatever A mechanic earning as much as $40 a week (it must be remembered that this sum would represent nearly twice the same wages in this country as in the United States in consequence of the cheaper cost of living) is compelled to insure and can demand 'free medical attendance, drugs and appliances" Moreover any person who has been insured for five years may continue as a voluntary insurer after he rises in the world and passes the income limit Thus, if he becomes an employer and a rich man instead of paying the fees of his station in life h can continue to obtain medical attendance at the same rate as a workman Another condition which the profession resents is that disciplinary power is vested in the local insurance committees which contain a large number of representatives of the friendly societies It is held that like other learned professions such as the church and the law, the medical profession should be disciplined by itself

Criticism of the Regulations

The National Medical Union, an association of northern physicians formed at Manchester to strengthen the resistance of the British Medical Association to the act, has issued a pamphlet strongly criticizing the act It is declared that private practice among the poorer classes will be undermined At every turn there will be bureaucratic interference The varying forms to be filled up, the official accounts to be rendered and the amount of gratuitous work to be performed will be among the minor fruits of the system Members of the profession should never agree to having their lives harassed by the institution described as the "complaints committee" The root fault of the whole scheme is the statutory obligation to attend which is placed on the physician Medicine is a delicate and personal art and the relation between patient and physician is best left to the parties concerned The disciplinary regulations would destroy the old relation based on freedom, confidence and respect and substitute for it a legal obligation

The State Medical Service Association

The first general meeting of the State Medical Service Association which was formed in Liverpool in July, has just been held in London, with Professor Benjamin Moore in the chair One hundred and thirty five physicians and a few laymen have, in response to circulars explaining the objects of the association, become members An executive committee was appointed with Dr G A Heron as chairman, and arrangements have been made for the formation of district branches Negotiations for the issue of a weekly journal, the *Medical World*, have been completed The association has nothing to do with the controversy arising out of the national insurance act The conception of the association and the scheme as advocated preceded the introduction of Mr Lloyd George's scheme into the House of Commons The association contends that the interests of the public health in this country demand a state-supported medical service, which should unite preventive and curative medicine and be available for every man, woman and child, rich or poor Another object is the nationalization of hospitals It is proposed that these institutions should be used for consultative, operative and therapeutic work at the request of and in association with the patients' own physicians The scheme provides that the whole service shall be administered by a board of health, under a minister of public health, with cabinet rank, assisted by expert medical advisers The association holds that in existing circumstances many of the most able and willing researchers are compelled by economic conditions to desert the centers of investigation in order to earn a living in practice and vast stores of the most useful material are neglected, because in the struggle to obtain a livelihood the busy general practitioners have no time to utilize it The evils at present due to long hours and irregularities of work, the unavoidable waste of time in the building up of practices, and the financial dependence of the practitioner on the patient, can, in the association's view be remedied only by the organization of the profession as a branch of the nation's civil service The time has come it is held when every medical practitioner, man or woman, should be guaranteed an adequate and certain salary during the active years of service, coupled with a system of gradual promotion, and followed by a generous pension However fascinating this scheme is not likely to receive much support in the profession outside a small minority holding socialistic or "advanced" political views

Alcohol and Cancer

Delivering the annual lecture under the Lees Roper Trust at Norwich recently, Sir Alfred Pearce Gould K C V O, said the experience of the United Kingdom Temperance and General Provident Institution was that death from cancer was more than twice as frequent among the non abstaining section of their policy holders as it was among the abstaining section It had also been shown that the cancer incidence in men of different occupations varied directly with the habits as regarded alcohol of those engaged in such occupations For example cancer was twice as frequent among brewers and London publicans as among clergymen His experience of this disease enabled him to say that it was more rapid and more distressing among those who took alcohol and that free consumption of alcohol added greatly to the rapidity and severity of the disease The taking of alcohol was not the cause of cancer but it certainly lessened a man's power of resisting the attack of the disease

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Nov 8, 1912.

Hematogenic Origin of Certain Forms of Acute Appendicitis

Notwithstanding clinical, anatomic, pathologic and experimental investigations tending to show the hematogenic origin of certain forms of appendicitis, this has not been unmistakably demonstrated until now, for in no case has it been possible to prove through blood culture the preliminary circulation in the blood of the germs which produced the lesion in the appendix The report which Professor Widal made at the meeting of the Académie de médecine, October 22, has the value of experimental evidence In a woman who for two weeks had presented the classical picture of a typhoid infection without any symptoms of appendicitis, blood-culture permitted the isolation twice of the *Bacillus paratyphosus B* At the end of two weeks, symptoms of peritonitis developed, and were followed by death in twenty four hours Autopsy revealed the presence of a perforating appendicitis accompanied by ecchymotic lesions of the cecum The paratyphosus B bacilli existed in almost a pure state in all these lesions Histologic examinations confirmed the finding of invasion of the appendicular and cecal walls through the blood and showed the presence in the capillaries of numerous colonies of eberthiform bacilli This typhlo appendicitis presented the only intestinal sign of septicemia The small intestine was entirely normal, there was not the slightest lesion of Peyer's glands or of the lymphoid organs This observation makes clear how appendicitis can develop after any one of several general infections or even after a subcutaneous suppuration

First International Congress of Pediatrics

This congress, organized by the Association internationale de pédiatrie, was held in Paris, October 6 10 Unfortunately it did not have a full measure of success owing to the absence of American and British physicians, then, too the manner of recruiting members of the association lays itself open to criticism In his opening address Professor Hutinel of Paris, president of the congress, said that this body should be composed only of physicians and surgeons devoted especially or exclusively to the study of pediatrics, such as those who direct infant hospitals, infant asylums or infant dispensaries and especially teachers of pediatrics "The number of the members of our association," said Hutinel "has been largely reduced in this way, nevertheless I believe that it ought to be reduced still further It is our desire that our meetings should have a scientific interest and a true scientific importance and that the association should be composed only of the leaders in our specialty" It is to be inferred that admission to the association is closed to practitioners who do not have a hospital service and this is to be regretted, for among these practitioners there are some who have won a just reputation by their work in pediatrics Of subjects discussed, poliomyelitis would evidently have gained if Americans had come and reported the results of their experiences to the congress As this subject was discussed at the recent International Congress on Hygiene and Demography held at Washington (THE JOURNAL, Oct 5 p 1313), I shall not refer to it Among the reports on infantile anemias that of Professor Czerny of Strasburg deserves special mention

ANEMIA OF ALIMENTARY ORIGIN IN INFANTS

It is often customary to call all pale children anemic, but according to Czerny anemia should be distinguished carefully from mere paleness, the latter, of nervous origin is present in vasomotor troubles and is found in cases in which the blood is normal For diagnosis of anemia, it is necessary that the mucous membrane as well as the skin should be pale and that the blood examination should show a diminution in hemoglobin and in the number of the red cells Although paleness is often found among infants of all ages it is almost exclusively in the first year that anemia is observed After the second year it is relatively rare Insufficient feeding alone does not determine anemia, for anemia may accompany a diet that is apparently sufficient in quantity or which is even more than enough for the needs of the child It develops exclusively among certain children who have been fed on milk exclusively for a long time Anemia of alimentary origin comes on by degrees In some cases the paleness of the skin and of the mucous membranes and the change in the condition of the blood are the only symptoms of the disease, and in other cases there is also a hypertrophy of the spleen In these cases enlargement of the spleen comes first and anemia follows Czerny believes that cases of anemia with hypertrophy of the spleen are due to a combina tion of a predisposition toward anemia and the exudative diathesis or hereditary lymphatic temperament It is to be noted that anemia always develops at a time when the child is quite fat Czerny attaches particular importance to the symptoms of obesity, for experience shows that obesity can be developed only by a food rich in fat, such as milk generally is Children who for one reason or another do not tolerate milk well or who even refuse it and therefore are given a regimen in which carbohydrates predominate never become so fat as the others and never acquire alimentary anemia In addition to the obesity these children often show a softening and insufficient development of the muscles Anemia of alimentary origin is related only to an exclusive milk diet and therefore in treatment the regimen should be corrected At the beginning of the anemia and in light cases it will be sufficient to withdraw a third or a half of the milk ration and to fill out the regimen with cereals, oatmeal, rice, tapioca, etc, vegetables and fruit In severe cases it is necessary to exclude milk altogether or to reduce the quantity to from 100 to 200 gm a day at the most Czerny gives meat twice a day in addition to cereals such as oatmeal, rice and tapioca, and vegetables and fruit In changing the regimen in the manner described it is necessary to pay attention at the beginning to the digestion of the child, especially if diarrhea is present This must be cured before putting the child on a mixed diet Children who are constipated and whose stools are rich in lime soaps following an exclusive milk diet may safely change from one diet to the other This change will succeed better if only four meals a day are given By these means Czerny has been able to cure a severe case of anemia in three or four months

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Nov 9, 1912

A New Public Health Institution at Saarbrücken

A third institute for hygiene and infectious diseases has been erected at Saarbrücken similar to the institutions at Gelsenkirchen and Beuthen for the industrial districts of Rhenish Westphalia and Upper Silesia The building has twenty eight light, airy rooms for the different departments The task of the institution is the scientific treatment of all hygienic and bacteriologic questions, for instance, questions of hygiene in mines, smelters and factories, the supply of water and regulation of sewage, elimination of smoke, soot and dust, as well as the bacteriologic diagnosis and elimination of infectious diseases To the new institution are transferred the duties of the local institute for bacteriologic investigation for the elimination of typhoid, as well as the station for medical examinations and the Trier training school for the disinfection service —an amount of important work thus devolves on the director of the institute, Prof Dr Lentze, and on the department manager and four assistants

Legislation with Reference to Nursing Bottles

A bill for the regulation of nursing bottles will soon be presented to the Reichstag The bill reads 1 Children's nursing bottles with glass or rubber tube, and also parts of such bottles, must not be manufactured, kept in supply for sale, sold or otherwise brought into commerce, or imported from foreign countries 2 Whoever violates paragraph 1 shall be punished with a fine up to 150 marks (about $36), or with imprisonment In addition, the articles may be confiscated without regard to whether or not they belong to the convicted persons If the prosecution or conviction of certain persons is not practicable, the confiscation may be independent In the official preliminary statement stress is laid on the great mortality of children during the first year of life, which is still extraordinarily high in spite of the decrease that has been noticed in the last few years It is the general opinion of physicians that nursing bottles with glass or rubber tube are very likely the source of many infant deaths The tube bottles are popular with many people because the children may be left to themselves with these They are placed in bed and the children can suck at liberty while the mother goes about her work, whereas the bottle without a tube must be, as a rule, held in the hand by the nurse during the time of feeding Bottles with tubes are difficult to clean and to keep free from germs If they are left, as is generally the rule, to the children, there is danger on the one hand, of a lack of the regularity in feeding, so important in the nutrition of children, and on the other, danger of overfeeding According to information received from all parts of the kingdom there is no question but that sickness and death may be caused by these bottles Attention is especially directed, in addition to the frequent diseases of the digestive organs, to those of the mouth and laryngeal cavity, such as thrush aphthous and ulcerative processes of the oral mucous membrane, inspiration pneumonia, scrofula, over feeding, emaciation

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Nov 9, 1912

Wounds Caused by Rifle Bullets in the Balkan War

In a report to the medical society, Professor Tedlicka who is acting as Austrian Red Cross surgeon in Belgrade, stated the results of his experience with 670 wounded soldiers in the Turkish war raging in the Balkan peninsula He calls the modern small caliber bullet a very humane instrument the injuries from which are usually severe but heal rapidly The majority of shots affect the skull or some internal organs as the bullets usually penetrate the body Injuries of the lungs, liver, brain, abdomen and even penetrating heart wounds heal promptly Professor Tedlicka has had only two amputations among his cases and only twenty limbs required plaster of Paris bandages The modern bullet is aseptic, owing to the heat developed by the high power powder As it is carried along with enormous velocity it finds no difficulty in traversing four to six men one behind the other If long bones are struck they are shattered to pieces only if the bullet has lost much of its original momentum Shots through the femur, the humerus and the skull have been observed with healing of the wounds within a fortnight A large percentage of the injuries are caused by the bayonet, proving the frequency of hand to hand combat in this war An interesting feature of the injuries among the Turkish captive soldiers is the fracture of the base of the nose This injury is caused either by the recoil of the Mauser rifle or by the blowing into the face of the occluding lever of the rifle's magazine The soldiers have had no experience in the use of these weapons and therefore are slow to take any precaution against such an accident Professor Tedlicka was full of praise for the first aid pack carried by the Servian soldier, to which he ascribed a large share of the prompt healing of the wounds

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Marriages

Max John Alexander, M D, Savannah, Ga, to Miss Margaret Palmer of Wingina, Va, at Richmond, Va, November 6

William Colby Rucker, M D, U S P H Service, to Mrs Elizabeth Harwood Miller of Washington, D C, November 11

Alexander Alexion, M D, New York City, to Miss Madeleine Coulon of Paris, France, in New York City, October 31

Llewellyn Powell Williamson M D, M C, U S Army, to Miss Mary Winslow Bartlett of Orono, Me, November 6

Alfred Lawrence Rhoads, M D, Scranton, Pa, to Miss Lou Eagles Wyckoff of Stroudsburg, Pa, November 12

Henry Pickering Parker, M D, to Miss Eleanor Cullom Ridgely, both of Washington, D C, November 22

Allen G T Childers, M D Mulhall, Okla, to Miss Grace May Taylor of Guthrie, Okla, November 9

Frederick Smith Park, M D to Miss Catharine Vollmer Young, both of Philadelphia, November 14

Eugene Julius Grow, M D, M C, U S Navy, to Miss Anna C Kimball of Lebanon, N H, October 30

William DeForest Olmstead, M D, to Mrs Bessie T Ijams, both of Baltimore, November 14

Walter S Bray, M D, Camden, N J, to Mrs Ida J Johnston of Philadelphia, November 6

Harry J McLaughlin M D, to Miss Leona Welsh, both of Glen Haven, Wis, November 12

James Robert Davis M D, to Miss Belle Lankford, both of Marshall, Mo, November 14

Theodore Friedman, M D Argenta Ark to Miss I abel Teal of St Louis, November 7

Clarence Loeb, M D St Louis ig (Chicago, November 28

Guy T Boyd M D to Miss F Wis, November 14

Paleotti,[6] formaldehyd is distinctly antiseptic in the concentration of 1:50,000

We may therefore conclude that the chemical data are still too scanty to throw much light on the antiseptic action of hexamethylenamin in the tissues and secretions, but that they therefore do not preclude the possibility of this effect Unsatisfactory as this conclusion is—and it is to be hoped that deficiencies will soon be removed—at least it leaves the way open for the bacteriologic evidence

BACTERIOLOGIC PROOF OF THE EFFICIENCY OF HEXAMETHYLENAMIN

Bacteriologic evidence of the existence or concentration of a chemical substance cannot compare with satisfactory chemical proof, but in the absence of the latter, it deserves considerable confidence Indeed, the bacteriologic information is perhaps more directly applicable to clinical problems In the case of hexamethylenamin the bacteriologic data are much more concordant and definite than are the chemical

In the urine Jordan[1] found complete agreement with the chemical data giving 30 grains of the drug per day, he found putrefaction to be retarded slightly if the reaction was neutral or alkaline *very markedly retarded or completely prevented* if the reaction was acid

In the bile Crowe[7] found a marked bactericidal effect with a daily dosage of 5 gm (75 grains).

In the cerebrospinal fluid Crowe[8] found that the same dosage had a marked inhibitory effect on cultures

The results of Crowe have been generally accepted, and deserve to be accepted until they are contradicted by equally convincing bacteriologic or chemical evidence Burnam alone seems to doubt their validity but he fails to record any bacteriologic experiments His refutation appears to be based entirely on his chemical data which we have already discussed That hexamethylenamin may split off effective quantities of formaldehyd even in an alkaline medium is shown in the experiments of Sollmann in which it prevented the putrefaction of a pancreatic maceration in 1 per cent sodium carbonate It is possible that this is due to the binding of the alkali by the proteins[9]

EXPERIMENTAL THERAPY

This is also in favor of hexamethylenamin Flexner and Clark[10] showed that it has a positive, if limited prophylactic value in experimental poliomyelitis and a similar result is reported by Crowe for subdural injections of streptococcus cultures

CONCLUSIONS

From the preceding considerations the following conclusions represent the actual state of our knowledge

1 The antiseptic action of hexamethylenamin seems to be due solely to the liberation of formaldehyd

2 This is proportional to the concentration of the drug and therefore to the dose and in the urine at least inversely proportional to the quantity of urine

3 The liberation is most active in acid urines but it may occur to a limited extent even if the reaction is alkaline, not however, in the presence of free ammonia

4 Hexamethylenamin, after its administration, is present in all the tissues and secretions The chemical data as to its concentration, and as to the liberation of formaldehyd, are too scanty to be of much service, on the other hand, they do not justify the rejection of bacteriologic or clinical data

5 The bacteriologic results show that the administration of hexamethylenamin prevents the putrefaction of acid urines, that it has a much smaller effect on alkaline urines, and that it confers a marked bactericidal effect on bile, and a distinct but limited antiseptic effect on cerebrospinal fluid

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[6] Quoted from Jordan (see Note 1)

[7] Crowe S J Arch internat pharmacodyn et thérap, 1908 xviii 315

[8] Crowe S J Bull Johns Hopkins Hosp 1909 xx. 102.

[9] This suggests that the administration of alkali (sodium acetate or citrate) would not interfere with the systemic action of hexamethylenamin while it would tend to prevent the urinary irritation Alkalies would of course be inadmissible if urinary antisepsis is desired

[10] Flexner and Clark The Journal A M A Feb 25 1911 p 585

PEEKE'S EPILEPSY CURE

W H Peeke, 4 Cedar Street, New York, advertises and sells a "cure for fits" Peeke styles himself "Professor" and has the letters 'F.D"—whatever they may mean—after his name Those who answer Peeke's advertisements are sent a free bottle of his "infallible remedy" and a thirty two page pamphlet purporting to discuss epilepsy and its treatment Like all quacks, Peeke is particularly bitter against his competitors and especially against those who, he asserts, have copied his booklet Says Peeke "None of these rascally quacks possess intelligence sufficient to correctly compose ten words of a medical treatise" According to Peeke, the cause of epilepsy is "disharmony of the action of the double nervous system" A full size bottle of the cure is sold for three dollars Peeke claims that his remedy is "absolutely harmless" and that "the tender babe, the delicate woman, the sturdy vigorous man can alike take it"

A cursory examination of the nostrum was made in the Association's laboratory The chemists report

'The specimen was a brown solution having a salt like, bitter taste *and an alkaline reaction* Alcohol, *alkaloids and* iodids were absent Quantitative tests indicated the presence of bromin and ammonia equivalent to about 13.7 gm of sodium bromid and about 4.1 gm of ammonium bromid in each 100 c.c. of the preparation The residue on drying amounted to about 18.4 gm in each 100 c c Small amounts of an alkali probably sodium carbonate and of a bitter substance, probably gentian, were present"

The analysis shows that Peeke's Remedy, like practically every other fraudulent 'cure for fits," depends for its action on bromids Peeke's fraud does not even have the saving grace of novelty Even the lies he tells are old. The labels he sends out on his stuff contain the following statements

> A perfectly safe remedy
> Contains nothing whatever that will be injurious to either body or mind
> *It can be used with perfect safety by the youngest or oldest* suffere

A preparation of the bromids is not a "perfectly safe remedy" in the hands of uninstructed laymen, neither in such hands can the preparation 'be used with perfect safety," nor is it true that it 'contains nothing whatever that will be injurious to either body or mind" It would seem that the federal authorities have three counts on which to declare this fraud misbranded under the Food and Drugs Act

Correspondence

Diagnostic Misinformation at a Health Resort

To the Editor —Many and curious are the tales that are brought back to us by patients from their visits to *Kurorte* Even if the tendency of the laity to distort medical information be discounted, there must be a grain of truth in their version *of the diagnostic misinformation occasionally* meted out to them, armed with which they seek out the family physician and challenge him for his failure to make similar composite diagnoses

There are capable *Kurärzte*, of course, although it will be evident at a glance that the particular one in mind is not of this class

Concerning the experience that gives occasion to these remarks, let me explain A woman living in the central part of this state visited one of the well known and most widely advertised *Kurorte* in this country She did not consider herself ill, but wished to indulge in baths and general treatment *in lieu of spending a vacation period at a fashionable* summer resort She consulted the physician in charge and submitted to him, for examination a single specimen of urine taken from an unmeasured twenty four hour excretion The result of the analysis is shown

Can anything be more ludicrous or—must it be confessed—*more absolutely stupid?* Please note the *composite character*

COPY OF URINALYSIS REPORT WITHOUT SIGNATURES

CHEMICAL			MICROSCOPIC	
Color	*Straw*		Crystals	*Negative*
Odor	*Ammoniacal*		Amorphous deposits	*Urea*
Sp Gravity	*1020*		Urates	*Sod & Pot urates*
Reaction	*Highly acid*		Leukocytes	*Many*
Appearance	*Cloudy*		Blood	*No*
Quantity of A M Urine	*℥viii*		Epithelial Cells	*Many*
Total Solids	*4*		Casts	*Negative*
Urea	*1.8*	Per cent	Remarks	*Acute nephritis*
Albumin	*Positive*	Heat Test		*Scant elimination*
		Nitric Acid Test		*Phosphaturia*
Sugar	*Negative*	Per cent		
Phosphates	*Large amount*			
Bile	*Negative*			
Indican	*Negative*			
Other Constituents				
	Brick-dust sediment			
Analyst		M D	Examiner	M D

Please Take this Report to the Doctor's Office for Explanation

of this urine it was ammoniacal, highly acid, contained a large amount of phosphates, brick dust sediment, no crystals and sodium and potassium urates!

The foregoing examination was made by the "analyst," who passed it along to the examiner for "remarks" These "remarks" are based on the urinalysis and are the comments of the physician in chief of the institution "Acute nephritis phosphaturia, scant elimination" As a matter of fact, this analysis does not contain a grain of evidence that any one of those three conditions existed Just what it does mean I leave to some cleverer translator of urinary findings than I

This patient was referred to me by her own physician, and my examination corroborated his in the positive exclusion of any existing abnormality, save the merest and occasional trace of albumin without further signs or symptoms of ill health

What comment need be made on the facts presented here? The ignorance shown by both the "analyst" and the physician in charge is deplorable in the extreme And when one considers the effect on the patient of such gross misinformation as to facts (in this particular instance charging a healthy person with suffering from an acute nephritis), the danger of permitting men of this caliber to assume positions of such responsibility is indeed apparent

Arthur J Patek, M D, Milwaukee, Wis

Glucose in Mince-Meat

To the Editor —In a recent number of *Good Housekeeping* Dr Wiley discusses the subject of mince meat One of the ingredients which Dr Wiley would allow in mince meat is "sugar," by which he means cane sugar An ingredient he would prohibit is glucose, or grape sugar Concerning the latter he makes the following statement "It is not a condiment, not a sweetener It needs to be sweetened itself No one can justly claim for it a higher nutritive property than an equal amount of sugar, many think it to be quite inferior"

What are the known and established facts? They are these 1 Glucose is a sweet tasting sugar, but is not so sweet as cane sugar 2 Glucose is produced as the end product of starch digestion in the gastro intestinal canal (dextrins being intermediary products) and as such is absorbed in large quantity into the blood and oxidized in the body 3 In the stomach and the intestine cane sugar is broken up into an equal mixture of glucose and levulose, both of which are absorbed by the blood, levulose, however, is largely converted by the liver into glucose so that the total effect of giving ne sugar is nearly the same as though glucose itself had been administered 4 Glucose is the normal sugar of the blood, being produced from protein when it is destroyed in the organism so that even in fasting the blood contains the normal content of 0 1 per cent of glucose 5 Starch is converted into glucose through water addition, in consequence, the heat producing power of 1 gm of glucose is somewhat less than 1 gm of starch Cane sugar is, in like manner, converted into levulose and dextrose through water addition, and therefore the heat producing power of 1 gm of cane sugar is about 5 per cent greater than of 1 gm of its products This is apparent from the following equation

Cane-sugar + water = glucose + levulose
1 molecule + 1 molecule = 1 molecule + 1 molecule
1 9 gm + 0 1 gm = 1 gm + 1 gm
7 518 calories + 0 0 calories = 3 730 calories + 3 720 calories

It is evident that 1 9 gm of cane sugar containing 7,518 calories unite with 0 1 gm of water, forming 2 gm of equal parts of glucose and levulose containing 7,468 calories The loss of 50 calories involved in the reaction amounts to 0 7 per cent of the calories contained in the original cane sugar 6 Experiments have shown that the value of glucose and cane sugar in nutrition is essentially the same. These perfectly well known facts can be readily verified by any one

Dr Wiley further inveighs against the use of commercial glucose because it is cheap This being a question of political economy, is outside my sphere of knowledge

Graham Lusk, New York

Comment —Dr Wiley's *Good Housekeeping* article deals with the attempt on the part of the officials that have to enforce the federal and state "Pure Food Laws" to establish a standard for mince meat Dr Wiley stated that, after reviewing the matter with some care, these officials reached the decision that commercial glucose was not a normal ingredient of mince meat This being so, the presence of glucose in mince meat would have to be declared on the label The question was not one of the wholesomeness, or otherwise, of glucose, it was the broader one of whether or not the public should be inveigled into buying a cheap filler (glucose) at mince meat prices Commercial glucose is not a condiment and can hardly, in the ordinary sense of the word, be called a sweetener In fact, it is so insipid that cane or some other real syrup has to be added to it to make it palatable It certainly has no higher nutritive value than the same amount of sugar It thus appears that each of Dr Wiley's statements is justified from a scientific standpoint and, beyond all question, his attitude toward the use of commercial glucose in foodstuffs is one that is in the public interest —Ed

Queries and Minor Notes

Anonymous Communications will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

TEMPERATURE VARIATIONS IN TUBERCULOSIS PREPARATION OF SALVARSAN RHEUMATISM PHYLACOGEN

To the Editor —1 What is your explanation of the presence of a subnormal temperature in one subject and a temperature above normal in another under the same conditions of rest in cases of phthisis pulmonalis that appear equally advanced?

2 What is the usual duration of such temperature in these cases under favorable conditions when the body weight continues to increase?

3 Please give latest technic in preparing salvarsan for subcutaneous or intramuscular injection Is it possible to obtain a clear solution?

4 What is the virtue of Rheumatism Phylacogen ?

L. D., N

Answer —1 The temperature in tuberculosis is markedly increased by a number of conditions It is the index of an auto-inoculation in a sensitive patient If there is little or no resisting power, the introduction of the tuberculous toxins into the circulation may produce no rise of temperature, but rather a fall due to the depressing toxic influence If, on the other hand the patient is sensitive to the toxin of tuberculosis, any circumstance which tends to increase the amount of these toxins in the general circulation will cause a rise of temperature Thus most tuberculous patients show an increase of temperature after exercise, because the exercise causes an auto inoculation by forcing some of the toxins from the tuberculous focus into the circulation The temperature may also be influenced by the activity of the disease in the local focus Thus one patient may have a lesion which is in a state of activity that will produce a rise of temperature, while another may have a lesion of the same character, but not active, in which the temperature may be even subnormal In other cases the rise of temperature is presumably due to a mixed infection by other organisms cooperating with the tubercle bacillus to produce the rise of temperature

2 Since the causes of the temperature are so various it would be impracticable to state the duration, which depends largely on the treatment and the course of the disease

3 Our correspondent is referred to the Syphilis Number of The Journal, Oct 5, 1912, which contains much information about salvarsan, and which, in the Queries and Minor Notes Department, contains references to other articles in previous issues, out of some of which he can doubtless find an answer to his questions

4 Rheumatism Phylacogen was discussed in this department Aug 10, 1912, p 464

IODEX AND IODIN PETROGEN

To the Editor —Please give the composition and therapeutic value of iodex and iodin petrogen

W J Merrill M D, Philadelphia

Answer —These preparations have not been submitted to the Council on Pharmacy and Chemistry, which is in itself an indication that the claims made for them would probably not be verified The claim is made that they will not stain the skin after they are applied locally As a rule such preparations do not contain free iodin Usually the base is of such character that if iodin is added to it a chemical combination occurs so that iodin is no longer free

Iodex is said to be an ointment of iodin, containing 5 per cent of therapeutically free iodin What the significance of this term 'therapeutically free" is we cannot tell Until further evidence is offered we feel safe in stating that the preparation probably does not contain any considerable amount of free iodin

Iodin petrogen is claimed to be a solution of iodin in petrogen —a proprietary preparation essentially equivalent to liquid petrox Two varieties are offered iodin petrogen 5 per cent and iodin petrogen 10 per cent From the nature of petrogen, which contains ammonium soap, it is probable that the greater part of the iodin enters into chemical combination

TREATMENT OF WINTER PRURITUS

To the Editor —I have a patient who is subject to an intolerable itching over the entire body most intense about the waist line which occurs only in cold weather and principally after taking a bath There is no evidence of eruption nor is there any skin affection Her general health is good This has been troubling her for a good many years but of late it has been growing worse I have tried many remedies but as yet have found nothing of special benefit It appears to be an irritation of the peripheral nerve endings but what is the causative influence?

B Lima Ohio

Answer —Evidently the case is one of so called winter pruritus It is essentially a hyperesthesia or hypersensibility of the skin and the itching is due in part to the dryness of the skin which increases its vulnerability, and in part to the irritation produced by cold In its slight form winter pruritus is exceedingly common The severer cases in which the irritation amounts to an affliction are rare The itching is excited not only by cold but by bathing, the wearing of rough underclothing and similar irritants

The treatment, in large part consists in avoiding as far as possible all sources of local irritation The underclothing should be as smooth and non irritating as possible, light cotton underwear or better light linen or silk should be worn next to the skin Bathing with soap and water ought not be indulged in beyond the point of necessity The bath may be made less irritating by the addition of bran, starch or marshmallow The bath should be taken in as short a time as possible and the body dried by dabbing the surface, not by rubbing Then the body should be powdered with talcum, starch or some other inert powder If the patient dresses quickly and does not go to bed for an hour or so the itching is less than if he gets immediately into bed after the bath In many cases the greatest comfort is obtained from anointing the body after the bath with a preparation such as olive oil, liquid petrolatum or a well made rose ointment Sometimes these applications are made more soothing by the addition of an antipruritic drug usually phenol, menthol or camphor A good application of this sort is made from olive oil or rose ointment containing from 0.5 to 1 per cent of phenol, menthol or camphor menthol, or from 2 to 4 per cent of thymol or camphor chloral A good liniment for use in some of the cases is phenol, ½ to 1 dram, zinc oxid and calamine, each 1 ounce, olive oil, 8 fluidounces and enough lime water to make 1 pint It requires trial to determine which applications are most comfortable Internal remedies are of no use.

USE OF TUBERCULIN

To the Editor —As the authorities judging from the literature think differently in regard to the following questions please give me the answers according to general professional usage

1 Should tuberculin be given when fever is present?

2 Should it be given after the patient has been in bed for quite a while say two months and the fever still persists?

3 As a routine which tuberculin is best as a therapeutic measure in pulmonary tuberculosis?

4 What is the interval (consensus of opinion) between injections when there is no reaction?

5 With the minimum dose a reaction is manifested Is it a contra indication for its further employment?

W H Smith, M D Goldsboro N C

Answer —1 As a rule, tuberculin should not be given in the presence of fever, as the fever is an indication of a toxemia due to the existence of the tuberculous toxin (tuberculin) in the blood

2 In such a case the physician must exercise his own judgment but if he believes that the fever is due to an active tuberculous process the use of tuberculin would be contra indicated

3 Some form of the old tuberculin (Koch's) is generally to be preferred The new tuberculin may be used, due precautions being taken as to dosage

4 The injections are usually repeated at intervals of about a week or ten days

5 Reactions should be avoided in the use of tuberculin In such a case the use of tuberculin should be suspended, or, at any rate, a smaller dose which will not provoke a reaction should be used

PROPHYLACTIC TREATMENT OF ECLAMPSIA

To the Editor —Please tell me in what number of The Journal I can find the extract from W Stroganoff's paper on the Prophylactic Treatment of Eclampsia I remember reading the article at the time it appeared and am anxious to see it again Also refer me to any other article by Professor Stroganoff on this subject

Adam P Leighton Jr M D Portland Me

Answer —Stroganoff's technic was described in The Journal, July 3, 1909, p 86, and abstracts in reference to it have been published recently

Stroganoff W Prophylactic Method of Treating Eclampsia *Ztschr f Geburtsh u Gynäk* 1912 lxx No 1 abstr in The Journal, May 18 1912 p 1575 *Ann de gynéc et d'obst* 1912 xxxix 300 *Zentralbl f Gynäk* 1912 xxxvi 800
Voigts Stroganoff's Prophylactic Method of Treating Eclampsia *Berl klin Wchnschr* 1912 xlix, 1771
Steiger M *Cor Bl f schweiz Aerzte*, 1912 xlii 617 abstr in The Journal July 20 1912 p 232
Zoeppritz B Prophylactic Treatment of Eclampsia *München med Wchnschr* 1912 lix 400 1708

ARTICLES ON VENTILATION

To the Editor —Please give me titles of articles on humidity and the effect of tropical sun and heat and confinement with and without circulating air etc Also carbon dioxid accumulation in connection with the circulation of confined air

Edmund P Fowler, New York

Answer —We have published in The Journal two editorials on the subject of ventilation One of them appeared Sept 16, 1911 p 980, the other, March 9 1912, p 702 There was also published in The Journal an article by H Sewall On What Do the Hygienic Virtues of the Open Air Depend? Jan 20, 1912, p 174 Other articles on the subject appear in the following periodicals

Paul *Ztschr f Hyg* 1905 xlix 405
Crowder T R *Arch Int Med* January 1911, p 85
Billings, Mitchell and Bergey The Composition of Expired Air and Its Effect on Animal Life Smithsonian Institution Publications 1895
Rosenau and Amos Organic Matter in the Expired Breath, *Jour Med Research*, 1911 xxv 35
Weichard *Arch f Hyg* 1911 lxxiv 185
Inaba *Ztschr f Hyg* 1911 lxviii 1

THE ULTRAMICROSCOPE

To the Editor—Please give me what information you can in regard to the ultramicroscope It has been mentioned editorially in THE JOURNAL recently W B

ANSWER—The ultramicroscope was invented by Dr H Siedentopf and is manufactured by Carl Zeiss It renders visible particles which are beyond the limits of vision with the ordinary microscope, even with the highest powers, and are hence described as ultramicroscopic The effect is obtained by arranging the condenser at right angles to the optical axis of the microscope, so that its concentrated light enters the slide containing or forming the object laterally—through the edge The light diffused by small particles is the only light that reaches the eye, and the latter will therefore be sensitive to its utmost limit

It is further necessary to limit the illumination to particles within the depth of focus, as otherwise the light scattered by *particles not in focus would form a luminous background* This object is attained by focusing the source of light, generally the electric arc, on an adjustable spectroscope slit, then focusing the slit in the object

In this way particles of gold having sides equal to from 1/6 to 5/1,000,000 inch are made visible By its means minute particles of other origin, such for instance as the flagella of certain bacteria, can also be demonstrated Other devices for dark ground illumination are employed, and these are sometimes considered as synonymous with the ultramicroscope This, however, is not correct, although they afford in some cases a useful substitute for it

ARTICLES ON TOBACCO

To the Editor—If within the last six years any articles on tobacco have appeared in THE JOURNAL, please tell me in what issues I can find them A G SINCLAIR Memphis Tenn

ANSWER—The article "Tobacco" in the department of Therapeutics of THE JOURNAL, May 8, 1909, p 1495, is a rather full statement on the subject In addition the following editorials have appeared

The Pharmacology of Tobacco Smoke THE JOURNAL, Jan 30 1909 p 386
The Use of Tobacco THE JOURNAL July 2 1910 p 32
The Effects of Tobacco on Body and Mind THE JOURNAL Oct 1 1910 p 1206
Some New Evidence on the Tobacco Question, THE JOURNAL Nov 16 1912 p 1798

The last named editorial contains two references to articles which appeared in the London *Lancet* (April 6, 1912, p 944 and Aug 24, 1912, p 547) These report experiments in the *Lancet's* laboratory New methods of research were employed, and the whole question of tobacco shown in a new light

LITERATURE ON HORMONES AND HORMONAL

To the Editor—Kindly give me JOURNAL references to hormones especially with regard to hormonal for and against also secretin gastrin H KINGSLEY HINE, M D Waterbury Conn

ANSWER—The subject of hormones was discussed in this department, Oct 19, 1912 p 1474, while hormonal was discussed Aug 10, 1912, p 465 where a considerable bibliography is given In addition we find another article

Jurasz, A T Death After Intravenous Injection of Hormonal *Deutsch med Wchnschr* May 30 1912 abstr in THE JOURNAL July 6 1912, p 75

With reference to gastric secretin, e find only two recent articles

Wentworth A H The Cause of Infantile Atrophy THE JOURNAL, July 20 1907 p 204
Meltzer S J Animal Experimentation in Relation to Our Knowledge of Secretions Especially Internal Secretions THE JOURNAL May 7 1910 p 1507

EFFECT OF MAGNESIUM SULPHATE

To the Editor—In an article entitled "The Treatment of Eclampsia" in a recent journal a well known obstetrician makes the following statement The stomach should be washed out and from one to two ounces of a saturated solution of Epsom salt left in the stomach to be repeated at intervals when the patient can swallow

In the light of our present knowledge of Epsom salt poisoning (through the work of Boos) may not such treatment prove dangerous? INQUIRER Boston

ANSWER—The treatment advised is certainly heroic and it is possible that in some cases poisoning might result. Usually however, a dose of one ounce of magnesium sulphate would merely secure a very loose evacuation with the removal of considerable water from the tissues Such a saturated solution placed in the stomach would not be likely to be absorbed but would excite a marked secretion of water into the stomach If the solution was passed into the intestine the chances for absorption would be greater We believe it would be better to limit the dose to one ounce of the salt which would be contained in about an equal quantity of the saturated solution

TIZ AND MUM

To the Editor—Can you give me any information relative to the composition of the following preparations Mum advertised as a perspiration deodorizer and Tiz a sore foot remedy?
RODMAN F SHEEN M D, Atlantic City N J

ANSWER—In the *Pharmaceutische Zeitung* Oct 26 1907, p 904, an analysis is given of the salve known as 'Mum, used as a deodorant It was reported to contain salicylic acid zinc oxid, glycerin water a tallow like fat and traces of essential oils The quantities of these ingredients were not given

Tiz" was analyzed by the Association's chemists and the results reported in THE JOURNAL Dec 2, 1911, p 1853 It was found to have essentially the following composition

Alum	60 per cent
Tannic acid	10 per cent
Salicylic acid	5 per cent
Talcum	5 per cent
Starch	20 per cent

FREQUENCY OF DOSAGE OF DIGITALIS

To the Editor—In the discussion on the action of digitalis in THE JOURNAL, Oct 26 1912 page 1565 it is recommended to give the drug every two or three hours Kindly reconcile this with the statement often made that digitalis does not begin to produce its effects for twenty four hours and hence that one dose a day is all that should be given J R Y

ANSWER—So far as we know, it is not commonly recommended to give digitalis only once a day The frequency of its administration should depend on the rapidity with which it is necessary to secure the maximum effect on the heart In acute cases it may be necessary to give it once in two or three hours, but as a usual treatment the administration of the remedy three times a day is sufficient Accumulative effects appear to be due to the slow elimination of the drug so that after the physiologic action of the remedy is apparent doses should not be repeated any more frequently than the drug can be eliminated from the system

LITERATURE ON ENTERTAINMENT FOR THE INSANE

To the Editor—I have been asked by our local society to deliver a paper on insanity and I have decided to write on the value of entertainment for the insane Please refer me to articles on the subject W H S ——— Ohio

ANSWER—The following may be referred to

Zeller C A More Work and Recreation for the Chronic Insane *Kansas City Med Index Lancet* October 1910
Cohn F Systematic Occupation and Entertainment of the Insane in Public Institutions THE JOURNAL April 18 1908 p 1249
Barrus Clara Nursing the Insane Macmillan Co New York 1908 (This book has a chapter on the occupation and amusement of patients)

Dr William L Russell of the National Committee on Mental Hygiene 50 Union Square New York, would probably be able to give further information on this subject

NORMAL BLOOD SERUM IN HEMOPHILIA

To the Editor—Please give me a list of recent articles on the use of normal blood serum in the treatment of hemophilia and hemophilia neonatorum C F S[illegible] Litchville N Dak

ANSWER—In THE JOURNAL, Oct 26, 1912, are published a number of articles and a Current Comment on the subject The use of normal horse serum is discussed on page 22 of New and Nonofficial Remedies, 1912

THE RUSSO REACTION IN TYPHOID

To the Editor—Please give me the formula for Russo's typhoid fever test and state its efficiency
J T[illegible] GOODE M D Booneville Miss

ANSWER—The method of Russo's reaction in typhoid its time of appearance relative value and the necessary reagents were given in THE JOUR[illegible] 912, p 465, in answer to a similar query

Medical Economics

This Department Embodies the Subjects of Post graduate Work Contract Practice, Legislation Medical Defense and Other Medicolegal and Economic Questions of Interest to Physicians

SOCIALIZING THE BRITISH MEDICAL PROFESSION

In last week's issue the general effects of the new Insurance Act of Great Britain were discussed, with special reference to the possibility of such a plan being considered in this country[1] In one important particular the British situation differs materially from that in this country there have existed in Great Britain for many years, medical clubs, insurance organizations, and the so called "friendly societies," which have made a business of furnishing medical attendance to members in return for a low annual fee As the total membership of these organizations is estimated at about 6,000,000, and as most of these would come under the operation of the Insurance Act, it is evident that the attitude of the clubs and "friendly societies" constitutes an important factor in the situation in England In an article in a recent number of the *Medical Press and Circular*, of London, Mr Harold B Grimsdale, ophthalmologic surgeon of St George's Hospital, discussed the conditions which led to the passage of this law After commenting on the advance in modern scientific methods and the vastly increased cost of a modern education, Mr Grimsdale took up the discussion of the Insurance Act He said

"It has been a strange spectacle which has been presented to the world during the months that have passed since the passage of the Insurance Act—a spectacle without parallel in the history of medicine We have seen the united profession—united more completely than ever before—standing firm together in their resistance to an act which professes to carry out the work which is specially the province of the profession, namely, to provide benefits which it is the boast of our profession to give freely to all, very often without thought of reward, seldom with an adequate one It is indeed a strange spectacle, and the profession must have been sorely tried before they rose, almost unanimously, in protest against such an act

We are told almost daily by one section of the press that we are employing the worst methods of trades unions, that we have adopted all the vices of syndicalism, and none of the virtues, if it has any, that we have forfeited the right to the name of a generous profession Now, however much some of us may regret the conduct of this dispute between the government and the profession, however much small incidents may distress us and rankle in our minds, there can be no doubt that, on the main questions, the medical profession come out with clean hands We are certainly not on strike, for what is a strike? When the coal miners struck, coal went up to such price that the poor were unable to buy it at all and the rich were forced to economize When the taxi drivers came out, taxis could hardly be procured But there is no evidence that any medical man has refused to treat any sick person

What is it, then, that has united the profession as it has never been united before? Why are all medical men throughout the country breaking away from all their natural instincts, unwilling to take service under the act? To explain this it is necessary to go into a piece of somewhat ancient history We must examine the origin of clubs and voluntary hospitals, and so discover the reasons why the terms of the act are so little to our taste

"It is, in a sense our own fault that our services are regarded as of so little value It goes back to the commencement of medical charities All clubs had their inception, in so far as the medical benefits were concerned, in the charitable work of medical men When, about the beginning of the last century, or earlier, the difficulty of the medical treatment of the thrifty poor was recognized, a species of insurance was started so that the cost of an illness might not cripple any one individual, being spread over many Medical men, altruists by training were willing to give their services to these clubs for little or nothing It was recognized that the work was a form of charity, and it was not pretended that the fees received by the medical men were in any degree adequate reward for the services rendered, but were to prevent them from being largely out of pocket by their kindness Many such clubs in the country have been run by my personal friends, who were out of pocket at the end of each year, but were content to continue their charitable actions, knowing how great was the value of their services to the poor

"Another form of contract practice is not uncommon in some parts of the country, especially in the colliery districts Here the medical officer is the servant of the colliery, and the manager deducts an amount varying with the weekly wage from the pay of each collier

"Thus a roughly equitable scale is worked, a man earning £1 a week or less pays 1d, and for each £1 or fraction of £1 he pays another 1d In this way the collier whose total earnings average £156 (£3 a week), will pay 13s a year for his doctor This sliding scale is in accordance with the usual medical practice to charge according to the capacity of the patient When the large friendly societies began to cater for the same medical benefits, they were able to point to the small honoraria accepted by the medical officers of these clubs, to induce men to undertake their seemingly similar duties for the same insufficient payment

"The astute business men who were in charge of the clubs pointed out to the young practitioner how valuable was the *advertisement and introduction which followed his acceptance of the club terms, and were usually able to persuade him to* come to an agreement The terms were absurdly low, some clubs even made money out of their medical attendants, that is, they levied a certain sum, say 1d a week, from each member, and paid the medical man 3s or 3s 6d a year, saving the balances for other uses of the club If no local medical man were willing to take the work, they were often able to import an outsider who would take the post, and the mere hint of such a proposition would weigh heavily with a struggling man who would be called on to face new opposition It did not occur to the managers of the club—or at least they showed no signs of appreciating the fact—that the advertisement would have been just as good for the doctor if he were reasonably paid By degrees, the status of the club altered, instead of being confined to the really poor, the limits were so widened that any one was able, for the absurd pittance at which the club was started, to demand the services of the medical officer

"Men who joined poor became rich, but were still entitled to the medical benefits Often, it is true, the more successful men, who belonged to the club, were willing to forego their benefits, while continuing their subscription for the good of their poorer brethren, and called in, when occasion required, a medical man at his usual fees This might or might not be the medical officer of the club, but this was a purely voluntary sacrifice on their part, and though many did not demand sick pay in illness, feeling a natural hesitation to take from the club funds a few shillings a week which their fellows would know to be of small importance to them, a much smaller proportion refused the medical benefits, they were not unwilling to accept the benefits which could not so easily be traced

"No medical officer of such a society could make a living without a very large club, and, on the other hand, with a large contract practice, the number of patients to be seen was so great that the medical man could not give adequate attention to each It was physically impossible to go carefully through all the differentia in making an investigation, and hence, since the work had to be done, it was very tempting to make a snapshot diagnosis, or give a placebo

By degrees this system of clubs became so prevalent that in many large towns there were hardly any inhabitants left who were not swept into the net of the insurance companies, and thus brought into the range of medical benefits All private practices were swallowed up by the clubs

"What wonder, then, that there came an outcry from all those most interested in the welfare of the profession, that by the contract system all initiative was being destroyed and that the medical men engaged in this work were being ruined mentally and financially by it, in the name of charity? What wonder that the men who found themselves fleeced on every side were anxious to escape from it? And yet it had some advantages The contract system did away with the necessity for a great deal of bookkeeping, always irksome to a busy man, and at the same time there was a certain income with no risk—so far as the contract extended—of bad debts Hence many practitioners, with wife and family dependent on them, dared not, as individuals, make a stand against the clubs And who shall blame them?

"At the time when the insurance bill was first heard of it was recognized by all that some system of state insurance against sickness was most desirable Medical men were all in favor of the idea A workable scheme providing a service throughout the country, had indeed been suggested by some of them and had been tried in certain localities, medical men, therefore taking into consideration that they would have to be the chief workers under the act and that they had already some little experience in the treatment of the people who would come under it, remembering also that they had protested on every opportunity against the system of contract practice, not unreasonably expected that they would be asked through their organizations, to advise on the best methods of working However, as I shall tell you, they were not consulted they might have thought—since they were going to bear all the risk—that the state would deal not only fairly but generously with them

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[1] Socializing the British Medical Profession editorial The Journal A M A Nov 23 1912 p 1890 Those who wish to read further of the progress of the movement are referred to our weekly London Letter during the past few months.

'They were doomed to disappointment, the action of the government is barely credible, and not at all creditable

"The bill was brought in in May, 1911 In spite of repeated requests, the chancellor of the exchequer saw the representatives of the British Medical Association for the first time in April This was the only deputation from the Association received before the introduction of the bill, and at this meeting no special opportunity was afforded to the Association for ascertaining the provisions of the bill Nor, apparently, was the General Medical Council, nor the Royal Colleges of Physicians and Surgeons treated with more courtesy Presumably the chancellor had medical advisers Who they were has not, I think, been made known, but they certainly were not the associations of medical men, who would have commanded the respect, and been in some sense at least the representatives of medicine

"When the medical provisions were known, it was at once seen that they were most unfavorable to the best interests of medicine In the first place, the payment was to be *per caput* This alone must stamp any scheme as liable to failure It is not in the interest of any man's work that he should be paid at a higher rate the less work he does It cannot induce to keenness and initiative, if the keen man is penalized because of his keenness

"The more care taken in diagnosis and investigation, the less the reward It must not be forgotten that investigation on modern lines costs money and this had to come out of the funds for payment of medical men

"The chancellor of the exchequer has, throughout, shown himself ignorant of the first requirements of modern medicine It is, if one may judge from his attitude, his opinion that doctors are engaged in a guessing competition, with numbered bottles which agree with the number of the disease from which the patient suffers

'Lastly, the suggested remuneration is inadequate Of course, it is perfectly true that nowhere is it laid down in the act what the rate of remuneration is to be, but it is acknowledged that only a certain rate is justified by the actuaries

'The chancellor has been very generous—at our expense—to the working man in an approved society Under the present act the laboring man pays about ¾d a week for his medical attention He is often willing to pay 7s 6d a year for the fun of keeping a dog, it is not too much to expect that he should pay as much for keeping his health

"And, again, let me mention the case of firms who own large numbers of horses They usually pay the veterinary surgeon a contract fee to look after them, and this is usually 21s a head Now a horse cannot malinger, and cannot demand unnecessary medical attention

"Or we may look at the matter another way The government has been hitherto willing to pay 8s 6d a year for the medical attention of each employee in the post-office who are men of picked physique and in good health It is not likely that the government has been paying to the medical men who have had charge of these and other public servants, twice the value of the services rendered Why should we be asked now to undertake the treatment of all lives—healthy and unhealthy—who are compelled by the act to insure themselves, at about half the sum which the government has previously thought equitable for healthy lives?

'Surely, on all counts we are fully justified in our rejection of the scheme designed by the government and in our determination to build up a better public medical service by our own efforts '

Although frequent references have been made to this measure in various departments of THE JOURNAL, during the past two years, the principal points in the controversy may not be fresh in the minds of our readers A summary of the situation may therefore be of value

Mr Lloyd George introduced his bill in May, 1911 A special representative meeting of the British Medical Association was called for May 31 and June 1 1911, in which the general features of the bill were approved with reservations and the 'six cardinal points' stating the objections of the Association to the bill were formulated. The points on which the British Medical Association agreed to stand were

1 An income limit of £2 ($10) a week, as the maximum for those entitled to medical benefits

2 Free choice of physician by patient subject to the consent of the physician to act

3 Medical and maternity benefits to be administered by local health committees and not by "friendly societies"

4 The method of remuneration of medical practitioners adopted by each local health committee to be according to the preference of the majority of the medical profession of the district

5 Medical remuneration to be what the profession considers adequate having due regard to the duties to be performed and other conditions of service

6 Adequate medical representation in the various boards and committees charged with the operation of the act

At the annual representative meeting of the Association at Birmingham in July, 1911, the action of the special committee was reaffirmed A second special representative meeting was held in London, Nov 23 and 24, 1911 The action on the six cardinal points was again reaffirmed and the Association voted to use all means to prevent the establishment of any form of medical service under the act, except under arrangements consistent with the six cardinal principles Since the passage of the act in December, 1911, the position of the British Medical Association and of practically the British medical profession has been one of refusal to work under the provisions of the law in its present form As a result, the law, while enacted, is at present practically inoperative, pending an adjustment of the differences between the provisions of the law and the demands of the profession The law as it stands creates an insurance fund by contributions from the insured, the employers and the state, the control of which fund is in the hands of the insurance commissioners The power of fixing the income limit is left to the local committee in each district, but the general position taken by the government has been in favor of a maximum income limit of £160 ($800) per year, while the British Medical Association has insisted on a maximum limit of £2 a week, £104 ($520) a year The controversy over freedom of choice of physicians has been modified by the adoption of regulations by the committee, but is not as yet satisfactorily adjusted. The third point was practically conceded in the passage of the bill, and the administration of the medical benefit is in the hands of insurance committees and not in that of friendly societies The method and amount of remuneration are the points over which the fiercest controversy has been waged The method under the law is to be determined by the insurance committee after consultation with the local medical committee This is not regarded as of so much importance as the amount since the sum paid to each physician has been shown to be about the same under any one of five proposed methods Regarding the amount, the representative meeting fixed 8s 6d as the minimum capitation fee, without including medicines or extras The chancellor of the exchequer, October 23, offered 8s 6d per insured person, out of which 1s 6d was to be definitely allotted for drugs and instruments, 6d additional being held for drugs in case the first amount proved insufficient and the remaining 6s 6d being for the compensation of the physician This is a considerable increase over the terms first proposed but lacks 2 shillings (48 cents) of the minimum amount adopted by the British Medical Association The sixth condition that of representation, has probably been granted but a seventh relating to dispensing, has been added The present situation seems to be that after eighteen months of constant warfare, the British Medical Association has succeeded in having the provisions of the law materially modified either by changes in the bill itself, or by the adoption of regulations by the insurance committee The question of whether the modifications are sufficient to make the present arrangements sat[illegible]tory to the physicians was referred to a third [illegible] meeting which was to be held Novem

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CALIFORNIA Los Angeles December 3 6 Sec, Dr Charles L Tisdale, 929 Butler Bldg, San Francisco

DELAWARE State Society and Homeopathic Examining Boards, Dover and Wilmington, December 10 12 Secretary of the Medical Council Dr Henry W Briggs, 1026 Jackson St. Wilmington

KENTUCKY The Armory, Louisville, December 12 Sec Dr J N McCormack Bowling Green

MARYLAND Regular 1211 Cathedral St, Baltimore, December 10 Sec Dr J McPherson Scott, Hagerstown, Homeopathic St Luke s Hospital Baltimore December 13 14 Sec, Dr O N Duvall, 1326 N Mount Street

OHIO Columbus December 10 12 Sec Dr George H Matson, State House

PENNSYLVANIA Philadelphia December 3 5 Sec Nathan C Schaeffer Harrisburg

VIRGINIA Richmond, December 17 20 Sec, Dr Herbert Old Norfolk.

West Virginia July Report

Dr H. A Barbee, secretary of the State Board of Health of West Virginia, reports the written and oral examination held at Charleston, July 8 10, 1912 The number of subjects examined in was 16, total number of questions asked, 170, percentage required to pass, 80 The total number of candidates examined was 48, of whom 37 passed and 11 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent
Howard University Washington D C	(1912)	87
Chicago College of Medicine and Surgery	(1912)	82 83
Bennett Medical College	(1912)	84
University of Louisville	(1911)	86
	(1912)	80 81 81 82 82 85
College of Physicians and Surgeons, Baltimore	(1912)	80 80 80 81, 81 82 83 84 85 86 86 87
Maryland Medical College	(1905)	81
	(1912)	81 83
Baltimore Medical College	(1899)	87
	(1912)	85
University of Maryland.	(1911)	80
American Medical College St. Louis	(1912)	81
Jefferson Medical College	(1906)	85
	(1912)	85, 88
University of Pittsburgh	(1912)	84
Meharry Medical College	(1912)	82
Medical College of Virginia	(1911)	81
University College of Medicine Richmond.	(1912)	88

FAILED

College	Year Grad	Per Cent
University of Louisville	(1911)	76
	(1912)	70, 78
College of Phys and Surg Baltimore	(1912)	73 77 77 79
Maryland Medical College	(1911)	74
	(1912)	73
Eclectic Medical College Cincinnati	(1912)	71
Illinois Medical College	(*)	71

* Information obtained indicates that this candidate did not graduate

The following questions were asked

ANATOMY AND EMBRYOLOGY

1 Give the anatomic divisions of the spinal column and the bones in each division 2 Name the bones of the middle-ear and give their connections 3 Describe the different kinds of joints giving examples of each variety 4 Describe the sartorius and the occipitofrontalis muscles 5 Describe the thoracic duct 6 Give the branches of the aortic arch 7 Give origin course and distribution of the sciatic nerve 8 *What bony cavities communicate* with the nose? Describe the development of the frontal sinuses 9 Give the early steps of development after impregnation 10 Trace the fetal circulation

CHEMISTRY AND MEDICAL JURISPRUDENCE

1 Give a simple test for organic impurities in water 2 What is the difference between urea and uric acid? 3 What chemical tests are most important in the analysis of urine? 4 Describe the test for bile blood *pus and urea in urine 5 Give test for detection of* morphin 6 What is the effect of inhaling air rich with ozone on the respiratory organs? 7 What is the reaction of blood during gout? 8 In a medicolegal sense what constitutes a dying declaration and what is necessary to make it evidence in a court of justice and how should it be taken? 9 At what period will a *body float* after being drowned? 10 What are symptoms of poisoning by wood alcohol and treatment for same?

PHYSIOLOGY AND HISTOLOGY

1 Define afferent, efferent tropic inhibitory and motor and vaso motor nerve-fibers 2 State the functions of the vas deferens the vesiculæ seminales and the prostate gland 3 Define secretion excretion and assimilation 4 What digestive changes take place in the small intestine and the large intestine? 5 What is the physiologic function of the liver? 6 What changes are produced in the air and in the blood by respiration? 7 Give the histologic structure of a tooth 8 Describe a malpighian body 9 Describe hyaline cartilage 10 Describe the histologic structure of a lobule of the lung

SPECIAL MEDICINE

1 Describe the physical signs and symptoms on which you would base a diagnosis of aneurysm of the thoracic aorta 2 Diagnose *renal calculus stone in the ureter pus kidney* 3 Define diagnose and treat adenoid growths of the nasopharynx 4 What is hay fever? Give the etiology and treatment 5 Describe the technic of making intralaryngeal applications 6 Give the etiology diagnose and treat edema of the larynx 7 Give the etiology diagnose and treat simple conjunctivitis acute epidemic conjunctivitis and *trachoma 8 Define give the etiology diagnose and treat iritis* 9 Describe the effect of lead poisoning on the nervous system 10 Describe the technic of lumbar puncture

SURGERY

1 Discuss the principles underlying the local and general treatment of surgical infection 2 Give the pathologic and clinical difference between sarcoma and carcinoma 3 Name three suture materials in common use give a method for the sterilization of each *and discuss the relative* advantages and *disadvantages* of these materials 4 Give the diagnosis of cerebral compression due to extradural hemorrhage and differentiate it from compression due to depressed bone 5 Name the varieties of dislocations of the shoulder joint and describe the symptoms of the most common one 6 Give the etiology and diagnosis of empyema of the pleura 7 Give the pathology and early diagnosis of intestinal obstruction 8 Give the causes and diagnosis of rupture of the urinary bladder 9 Give the diagnosis and treatment of a fracture in the lower half *of the femur 10 Give the pathology and treatment of ingrowing* toenail

BACTERIOLOGY AND HYGIENE

1 By what agencies does the body protect itself against the entrance and harmful effects of pathogenic bacteria? 2 What are some of the phenomena attending pus formation? 3 Describe the formation of an abscess 4 State the most common sources of infection in diphtheria 5 Name some diseases that are communicable to human beings through cow s milk 6 How much fresh air is *required for normal respiration during twenty four hours? 7 What* infectious diseases may be due to impure drinking water? 8 Describe the agency of the ptomains in inducing diseases and the disorders produced by them 9 Name six carbohydrates used as food 10 What are the principal measures which you would employ for the prevention of the spread of infectious diseases?

OBSTETRICS AND GYNECOLOGY

1 Give the symptoms of pregnancy in the first three months. 2 Give the *indications for premature interruption of pregnancy* 3 Tell how you would manage a case of face presentation 4 Give the causes and treatment of post partum hemorrhage. 5 Give the prophylactic care of the breast before and after labor 6 Give the symptoms and treatment of puerperal eclampsia 7 Differentiate fibroid ascites fat and cysts 8 Under what conditions would you advise a hysterectomy in cancer of the uterus? 9 What are some of the peculiarities of gonorrhea in a female? 10 How would you treat extreme prolapse?

PRACTICE OF MEDICINE AND PEDIATRICS

1 Give the symptoms and treatment of chronic myocarditis. 2 Give the treatment of intestinal hemorrhage in typhoid fever 3 Give the period of incubation and of eruption of the exanthemata *4 What is uremia and how should it be treated? 5 Differentiate* heat exhaustion from sunstroke 6 What is the significance of the patella reflex as a sign of disease? 7 What are the indications of beginning hip-joint disease? What is the treatment? 8 Give the treatment of summer diarrhea in infants 9 What would you do in the case of a baby having convulsions about once or twice a week? 10 Give the symptoms and treatment of infantile scurvy

MATERIA MEDICA AND THERAPEUTICS

1 Give *rule for dosage of children* 2 Write a *prescription containing* four drugs. 3. What are somnifacients analgesics antipyretics? Give example and dose of each 4 What are serums? Name three and give dose 5 Digitalis preparations doses and physiologic action 6 Coal tar derivatives name four principal ones and give physiologic action 7 Cathartics name three varieties give therapy 8 Strychnin give therapy 9 *X* ray describe it and give therapeutic uses 10 606 describe methods of use Is it preferable to mercury and iodids?

PRACTICE OF MEDICINE AND PEDIATRICS (ECLECTIC)

1 Discuss acute articular rheumatism in children including complications and sequelæ 2 Define cretinism Give etiology diagnosis and treatment 3 Make diagnosis direct and differential of *small pox. 4 Give the etiology diagnosis and treatment of hip-joint* disease 5 Give the etiology and name the cardinal symptoms of tabes dorsalis 6 Give the symptomatology diagnosis and treatment of myocarditis. 7 Define herpes zoster Give the etiology and make diagnosis 8 Give symptoms diagnosis and treatment of poliomyelitis 9 *Diagnose* and treat scarlet fever 10 *Diagnose* and treat pneumonia in children

MATERIA MEDICA AND THERAPEUTICS (ECLECTIC)

1 Give properties specific symptomatology and dose of apocynum 2 What is the source of salicylic acid? Give therapeutic indications for the use of salicylates 3 What is the composition of Dover s powder? Give dose and indications 4 Name three emetics Give dose and indications for use. 5 What is the therapeutic *value of heat and cold? Methods of application? 6 Discuss thera*peutic value of elimination Describe effective measures 7 Discuss therapeutic use of KI 8 Name three bromids. Give properties dose and therapy 9 How would you proceed with the management of hyperpyrexia? 10 What remedies are available for the removal of tapeworm? Give dose and methods of administration

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Overwork as a Cause of Neurasthenia—Talking of the causes of neurasthenia, Dr Savill says 'The first of these is fatigue or overwork, and that you are no doubt familiar with in every day practice Just as a faradic battery will become weaker and weaker if it is used and will be restored by rest and warmth, so will the nervous system become weaker and weaker if it is overworked, that is, if there is prolonged forced *functioning*"—*Thomas D Savill in Clin Jour*

Book Notices

Public Health Chemistry and Bacteriology A Handbook for D P H Students. By David McKail M D D P H F R F P S G Lecturer on Public Health and Forensic Medicine St Mungo's College Glasgow Cloth Price $2 50 Pp 400 New York William Wood & Co 1912

This work is intended as a text book for students taking laboratory courses in public health examinations, both chemical and bacteriologic The author has endeavored to make it as complete as possible while leaving out matters which can be more satisfactorily taught and demonstrated than written about For this reason no illustrations have been introduced, as the various instruments and apparatus are seen and used in actual work An examination of the volume shows that the various methods are well described and the work is sufficiently complete to form a reliable guide for such examinations of foods, etc, as the physician may have an occasion to make

Recent Advances in Hematology Being the Dr James Watson Lectures for 1910 By Walter K Hunter M D D Sc Physician to the Glasgow Royal Infirmary Cloth Price $2 25 net Pp 110 with a Colored Plate William Wood & Co 1912

This volume represents the James Watson lectures for 1910, delivered before the Royal Faculty of Physicians and Surgeons of Glasgow The book covers the domain of hematology as represented in the most recent text books and many articles in current medical literature The statements are for the most part brief and practical For instance, the subject of viscosity of the blood is discussed in two paragraphs with the conclusion that the estimation of the viscosity of the blood has not thus far come into general use in clinical medicine While the book will not replace the more extensive treatises on clinical diagnosis or the special works on the blood, it will be of service in giving a clear idea of the present status of this important subject.

A Collection of Papers (Published Previously to 1909) By William J Mayo and Charles H Mayo Two Volumes Cloth Price $10 net Philadelphia W B Saunders Company 1912

These are reprints, the articles having appeared in various medical journals, although it seems incongruous to apply this term to such handsome volumes, which in appearance compare with the finest text books The books are uniform in type and are handsomely illustrated These articles are arranged according to subject and the table of contents shows what a broad field of surgical subjects the Mayos have been discussing in the literature of the country Instead of yielding to the temptation to prepare text books, as is too often the custom, the Mayos have simply gathered here the results of their prolonged study, analysis and experience, as contributions to the general subjects The fortunate possessor of these volumes will peruse them with pleasure and profit, knowing that he is learning from men who are painstakingly thorough and conscientiously exact

Digestion and Metabolism The Physiologic and Pathologic Chemistry of Nutrition For Students and Physicians By Alonzo Englebert Taylor M D Rush Professor of Physiologic Chemistry University of Pennsylvania Cloth Price $3 75 Pp 560 Philadelphia Lea & Febiger, 1912

To quote from the preface "The author is convinced from perusal of current medical writings in this country that there is need among American physicians for a work presenting the subjects of digestion and metabolism in a popular manner, without technical details, and from the standpoint of dynamics rather than from that of analytic statics usually occupied by text books of physiologic chemistry" This need Professor Taylor has endeavored to meet by rewriting in the form of a concise, systematic treatise the substance of his lectures on this subject The book presents a thorough scientific account of the subject, beginning with the composition of foodstuffs and the nature of ferment action, and tracing the changes occurring in salivary, gastric and intestinal digestion and in the processes of metabolism inside of the organism After a detailed consideration of the metabolism of various elements of the food the subject of metabolism considered as a whole is taken up in a chapter of moderate length In this are discussed the relations of protein, carbohydrate and fat, with such subjects as inanition, normal diet and nutrition Another chapter considers the production of body heat regulation of body temperature, the nature of fever, etc The book is well written and presents many conclusions of importance to physicians

Medicolegal

Sufficient Authority for Action of Coroner's Physician

(Hassard vs Lehane (N Y), 135 N Y Supp 711)

The First Appellate Division of the Supreme Court of New York, after having on a previous appeal, reversed a judgment of nonsuit and granted a new trial, as reported in The Journal of August 5, 1911, page 502, now reverses a judgment rendered in favor of the plaintiff, and grants another new trial The action was brought by a mother to recover damages from a coroner's physician for an alleged wrongful dissection of the remains of her son and detention of parts of the remains The excuse offered on the first trial appeared to be that it was an interesting case" which was held insufficient But on the second trial a quite different defense was set up The evidence tended to show that the defendant had received from the coroner's clerk a list of cases for investigation, including the case of the plaintiff's son who was reported to have met his death by falling from a vehicle The defendant then went to the hospital where the remains were, examined the hospital records and talked with the house surgeon, and was told that the deceased was found in a drug store by a policeman, whither he had been carried from the street by a citizen who disappeared, that there were no marks of violence on him, that he died about two hours after being received at the hospital that the house surgeon was unable to account for the cause of death, and "that there was a question of suspicion about it ' The defendant then reported to the coroner over the telephone what he had learned, and was directed by that official to make a "complete" autopsy, and discovered that the immediate cause of death was a hemorrhage from a ruptured spleen, but was unable without a microscopic examination to determine whether the rupture was traumatic or due to disease He again reported the facts discovered to the coroner, and was directed by the latter to make a microscopic examination of the spleen, and, pursuant to that direction, he removed the spleen from the body and sent it to a laboratory for examination The trial court charged the jury that the direction of the coroner was not a subpena, but that if given, it might be considered on the question of the defendant's good faith in assessing damages, and that an autopsy even if directed by the coroner, was not justified unless necessary to disclose the cause of death and then only to the extent required for that purpose The Appellate Division holds that there was error in these instructions It suggests that the word "summon' would have been more appropriate than "subpena" in the governing statute, but that at any rate, a formal subpena was not indispensable to the protection of the coroner's physician The question was whether the coroner actually directed the dissection of the body and the microscopic examination of the spleen, and the uncontradicted evidence was that he did It was for the coroner to determine whether the death occurred under such circumstances as to justify an inquest and an autopsy It was the defendant's duty to obey the direction of the coroner and to ascertain the cause of death Obviously he was concerned only with the medical side of the case and was not required to interpose his judgment against that of the coroner as to whether the deceased had died from criminal violence, etc His duty was to make an autopsy "as may be required," which should be construed 'as may be required by the coroner' If [illegible] fore the coroner directed the dissection [illegible] ero [illegible] am ination of the spleen, those [illegible] he defendant, constituted a complete

Society Proceedings

COMING MEETINGS

American Association of Anatomists Cleveland Dec 31 Jan 2
American Physiological Society Cleveland, Dec. 26 28
Southern Surg and Gynec. Assn Old Point Comfor , Va Dec 17 19
Western Surgical and Gynec. Assn , Cincinnati, Dec. 20 21

KENTUCKY STATE MEDICAL ASSOCIATION

Forty Seventh Annual Meeting held at Louisville, Oct 28 31 1912

(Concluded from page 1918)

Vaccine Therapy

Dr John H Blackburn, Bowling Green Vaccine therapy is not a panacea for bacterial diseases Much may be accomplished by the prophylactic use of the vaccines in certain types of infection They also have a distinct value in the treatment of many infections, acute and chronic, local and general Each case requires careful study and attention, a microscopic and cultural diagnosis being always made, if possible, and the proper dosage used at the proper intervals

Pellagra as Related to Insanity

Dr W E Gardner, Lakeland Physicians in hospitals for the insane do not, as a rule, see the case of pellagra until the mental symptoms are well developed, and it is with the mental condition that they are chiefly concerned, while the physician in private practice sees the patient from the point of view of the body first, and the mental condition afterward The form of insanity that predominated in the cases already in the institution, when pellagra developed, was that of dementia praecox The manic depressive types, with the depressive forms predominating, seem to come next in order, in our cases, but with less tendency to suicide than seems to occur in cases outside of institutions, and reported by authors *Melancholia of involution* or the 'anxiety psychoses" come in for a few cases with some distressing symptoms of fear and impending danger We have had only one case occurring in a patient with general paralysis, which was of short duration, due to the advanced stage of the latter disease The treatment in our twenty cases has been largely symptomatic and supportive

The Present Status of the Operative Treatment of Fractures of Shafts of Long Bones

Dr A H Barkley, Lexington The advantages of the open method are apparent The operator can place the bones in exact apposition, as the whole field is directly under the eye, all overriding or angulation is at once overcome In some types of fractures of the shafts of long bones, in spiral and oblique for instance, it is obvious that no amount of traction will reduce the fragments, and no known dressing will hold them with any degree of certainty in apposition as will the method of direct fixation The patient is relieved of annoying pain due to the movement of the fragments This is especially noticeable in many cases treated in a non operative way, and is sometimes due not so much to any movement of the patient's body as to the involuntary contractions of muscles This disagreeable feature is obviated when internal splints are used, as the bones are held firmly apposed There is less extravasation into the tissues when direct fixation is employed early than when treated otherwise, and the possibility of any intervening fragments of tissue and bone which defeat union is entirely obviated The deformity is practically *nil* and the bones are left more nearly normal and in no wise interfere with the wage earning capacity of the individual As a rule fractures that have been plated have no exuberant callus In cases in which other methods have failed and much deformity is likely to follow, this method offers the best result

I cannot subscribe to the views of those who never look at a fracture except in the light of an operation, and while the open method in selected cases is beyond doubt the best procedure, its employment in every case must be condemned In order to use internal splints, one must be prepared by training in surgical work and carry asepsis to the highest degree, that it should be done in a well equipped hospital and require special instruments goes without saying The application of internal splints requires specially constructed instruments, such as bone drills, elevators, long forceps for assisting in approximating the ends of bones, a special screw driver, etc. The set of instruments used by Lane will be found adequate for this operation

Alcohol, Its Therapeutic Uses and Limitations

Dr. W F Boggess, Louisville Alcohol is unquestionably a therapeutic agent of no little value to be used as a medicine with the same care, and with the same safeguards around its use and abuse as in the case of other poisonous drugs, such as morphin, cocain and strychnin In my opinion no drug requires greater acumen and therapeutic knowledge for its use than alcohol The continued use of alcohol has a tendency to destroy fine cell structure everywhere, as well as the finer moral and intellectual functions and faculties There are some types of fevers in which alcohol is of benefit, and certain types of patients with whom it also could be used with benefit The converse is equally true A great deal has been written for and against the use of alcohol in typhoid fever Some have asserted that it should be used from beginning to end, others that it is a drug which can be entirely dispensed with in the treatment of this disease None of these statements is correct There are many cases of typhoid fever in which, if the patients receive in the second or third weeks of the disease sufficient quantities of alcohol to support the system by lessening tissue metamorphosis, supplying something that is easily oxidized and thus saving food products and combating asthenia, there is great benefit and lives are saved It has been my practice for years in certain types of tuberculous states to prescribe half an ounce of brandy, well diluted, three times a day It assists the appetite, relieves pain by its quieting effect, and *increases the fat forming tendency by its own oxidation and* the effect it has in assisting digestion and lessening metabolism in the tissues The common routine and liberal use of alcohol as a remedy in influenza is to be discouraged and condemned There are many other remedies indicated in the depressing effects and complications of this disease that are as good as alcohol in the majority of cases, if not better

Fractures

Dr J Garland Sherrill, Louisville The object of the treatment of a fracture is to obtain repair of the injury and restoration of function with the minimum amount of deformity, loss of time and discomfort to the patient To obtain these results most perfectly, accurate apposition of fragments, restitution of contour, the prevention of redisplacement by complete reduction and proper appliance, and proper position, with rest, are necessary When should one employ the closed and when the open method of treatment? It is needless to say that no patient should be subjected to a cutting operation unless there is some clear and distinct reason for such procedure This, I believe, would be accepted as an axiom without argument, no matter how many and cogent reasons one might offer in support of the simplicity of interference Here, as *in all departments of surgery, it is the* surgeon's duty to exercise care and good judgment in selecting the method of treatment To illustrate my meaning let me cite fracture of the patella, which I have never treated by incision and suture of the bone, because I have thus far always been able to bring the fragments together satisfactorily by hooks, subcutaneous suture or splint. In one or two instances I have almost decided to lay open the overlying tissues in order to obtain approximation by direct appliances, but I have finally not been obliged to do so The open operation I believe to be legitimate, and probably needful in a few selected cases, but I am opposed to it as a routine treatment I would strongly urge frequent inspection of fractures especially during the early and later time of treatment, the first to avoid deformity, the second to pro mote restoration of function In the treatment of a fracture of the clavicle, that form of appliance must be employed which will hold the shoulder upward, backward and outward without being irksome to the patient In fractures of the shaft of the humerus, in my opinion there is no dressing equal to the Stromeyer cushion or a pad of towels along the chest with the arm bandaged to the chest. The forearm should be placed in a bandage and placed in a sling at the wrist, thus allowing the weight of the arm to make extension at the elbow and prevent the overlapping of fragments

How the United States Public Health Service Can Help in the Eradication of Preventable Diseases in Kentucky

Dr Joseph Goldberger, Washington, D C The first step in the eradication of preventable diseases is to know of their prevalence, and hence it is extremely important that there be provided some means of obtaining and distributing this information In the nature of the case the reports of sickness must in the first instance come from the local communities, and machinery must be provided to give the state this information But the state is *not an isolated unit, it* must know not only what is going on within its own borders, but also within those of its immediate neighbors, at least This information the U S Public Health Service attempts to supply through its weekly publication, the *Public Health Reports* Morbidity reports give the sanitary officer information with respect to the existence and the degree of prevalence of disease In order, however, that measures looking to the eradication of preventable sickness may be planned intelligently and the money of the community most advantageously spent, the sanitary officer must know what factor or factors are at work favoring their prevalence and to estimate the relative importance of the various factors involved The Service is ready and willing to help your health board in this great work Its willingness to help is unlimited and the amount of aid which it is able to render is circumscribed only by the limits of its available personnel and appropriations Your state can have this assistance for the asking, it can have more, if it will do its share through its representatives in Congress toward supplying the Service with more men and more money

The Public Health Problem Constructive Efforts Toward Its Solution

Dr. W L. Heizer, Bowling Green The chief objects of cooperation of these forces, it would seem, are (1) to educate the public in the proper methods of preventing disease through *the public schools, press, pulpit and from the platform,* (2) to furnish a sufficient number of competent speakers, and large audiences to greet them, (3) to elect county and state officials who will establish a county department of health with a competent health officer, well paid, to devote his entire time to the prevention of disease in his county a laboratory where immediate microscopic and chemical analyses can be made, free of charge, of water and milk and of bodily excretions from persons ill, (4) to secure the enactment and enforcement of sanitary laws to guarantee pure food, water and air to the people, (5) to secure larger investments by the state in good roads better schools, higher salaries for more competent teachers, and increase in appropriations to the state department of health

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SOUTHERN MEDICAL ASSOCIATION

Sixth Annual Meeting held at Jacksonville Fla Nov 12 14 1912

The President, Dr J W Jackson, Miami, Fla , in the Chair

The list of officers elected was given November 23, page 1800

Diagnosis of Malaria

Dr Graham E F Henson, Jacksonville, Fla In cases of suspected malaria the blood should be examined carefully for the detection of the parasites It should be the aim to secure laboratory confirmation of the clinical findings before placing the patient on specific treatment, provided there are no symptoms suggesting the more pernicious type of the disease In the event that quinin has been administered before the patient comes under *observation, a tentative diagnosis of malaria,* even in the absence of the detection of the parasites, is justifiable when (1) the clinical history of malaria is obtainable (2) the patient has an enlarged spleen, (3) a leukopenia is present (4) the red cell count is below normal, (5) the hemoglobin is reduced, and (6) the differential count shows an increased percentage of large mononuclears

DISCUSSION

Dr E C Thrash, Atlanta Ga A case came under my observation three or four weeks ago in which a diagnosis of tuberculosis had been made For six or eight weeks the diagnosis lay between malaria and typhoid I found the spleen much enlarged, and ruled out tuberculosis I thought that the patient had either typhoid or malaria He had been taking quinin systematically and regularly in all sorts of ways I gave him treatment for ten days, watched him, and found that he had high temperature continuously and occasionally a chill At the end of the eighth or ninth day I began to make examinations of the blood every six hours, and in the fourth examination I found estivo autumnal parasites I put him on 4 grains of sodium cacodylate hypodermically daily, and on large doses of quinin hypodermically to which he responded promptly and he has had no trouble since

Dr. Charles F Craig M C, U S Army A man became unconscious on the street, was picked up and taken to the emergency hospital He died in a short time I had the opportunity of examining the brain and spleen and found both loaded with estivo autumnal parasites Another patient was in the hospital for a week before a blood examination was made This patient died, and post mortem examination *revealed the spleen filled with these parasites*

Dr James H Randolph, Jacksonville Three cases of the cerebral form of malaria recently came under my observation, which illustrated the importance of blood examinations These cases were characterized by delirium

Dr William E Ross, Jacksonville A child had six convulsions in five hours, was unconscious, and had absolutely all the symptoms of acute epidemic cerebrospinal meningitis with a temperature of 102 F My diagnosis was cerebrospinal meningitis I was about to make a lumbar puncture. I took a blood smear, and found malarial parasites of both the estivo autumnal and tertian type The child was unconscious for six days before it responded to quinin treatment

Dr L. A Green, Jacksonville The records of our state hospital show that a number of patients admitted as insane were suffering from pernicious malaria These patients reacted promptly to quinin and recovered, but left the institution with the stigma that they had been insane, when, as a matter of fact, they had been suffering from malaria

Dr Joseph Goldberger, Washington, D C There can be no doubt that a routine examination of the blood is absolutely essential, but the general practitioner does not, as a general rule, avail himself of this means of diagnosis, believing that it is unnecessary

Dr C C Bass, New Orleans As to the time of taking blood from the patient, if we are dealing with the estivo autumnal type, the parasites may now be present in the blood for six or eight hours In estivo autumnal cases in which the clinical course is more or less tertian, with chills and intermittent fever, with, perhaps, normal temperature, the parasites segment almost altogether in groups as they do in the *tertian and quartan types* In such cases the *number of parasites* present in the blood after six or eight hours would be smaller than at any other time There never occurs a time when parasites cannot be found in the blood of the patient who is having chills and fever from malaria The proper time to make a blood examination for malaria is whenever you see the patient

Malaria in Alabama

Dr R H von Esdorf U S P H Service, Mobile, Ala *All forms of malarial fevers prevail in Alabama* The types of infection in the order of prevalence are tertian, estivo autumnal, subtertian, quotidian and quartan A large factor in the spread of infection is the colored race, in which the chronic type of malarial infection is proportionately greater than in the white race To obtain an index of infection in the community, a blood examination should be made of adults as well as children Latent or non chronic cases should be treated vigorously for at least a month, and then with prophylactic doses of quinin from April to November Prophylactic doses of quinin should be taken between April 1 and November 1 by all persons in Alabama living in the localities known to be infected The prophylactic dose I use is 5 grains of quinin sulphate, given morning and evening The microscope should be more generally used for making a diagnosis or confirming the diagnosis of malaria, or, if practicable, advantage should be taken of the state laboratory, where examinations of blood will be made

Malaria in the Puerperium

Dr. J V Freeman, Jacksonville, Fla When there is elevation of temperature during the puerperium in a woman who has caused her physician a great deal of anxiety and trouble during her pregnancy, and he discovers malarial infection, he is justified in giving prophylactic doses of quinin if he delivers her a second time, but he is not justified in giving it in every case he sees

DISCUSSION

Dr Graham E E Henson, Jacksonville, Fla Owing to the fact that any rise of temperature in the puerperium causes great alarm not only to the attending physician, but also to the members of the family, it has been my custom for the last five years, as soon as a patient is delivered, to put her on 10 grains of quinin a day By following this line of procedure in delivering 100 or more women, I have never seen malarial fever develop in the puerperium I generally give 5 grains in the morning and 5 grains at night

Dr Stevens T Harris, Highlands, N C It is erroneous to make a diagnosis of malaria simply from fever returning periodically I have seen fever, chills and sweats, typically malarial in character, recur without the presence of malaria You may also have chills occurring periodically and with regularity in tuberculosis and possibly in other septic conditions I would strongly urge that the microscope is the only way to diagnose malaria

Dr B B Simms, Talladega Ala Chills and fever may be present, and even if we find the plasmodia we cannot call the case malaria every time, because plasmodia frequently occur in the blood In Alabama it has been found that 11 per cent of the people have malarial parasites in the blood without manifesting symptoms of malaria

Dr W A Boyd Columbia, S C If a puerperal woman shows a febrile condition and we are not sure of the actual condition present I do not believe that we are justified in putting that woman on the routine treatment of quinin until we have proved by bacteriologic examination that she is infected with malaria

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Annals of Surgery, Philadelphia

November LVI No 5 pp 665 808

1 *Tetany Following Extirpation of Thyroid F J Shepherd Montreal
2 *Surgical Treatment of Aortic Aneurysm J A C Macewen Glasgow
3 *Primary Sarcoma of Peritoneum C S Venable San Antonio Texas
4 Thrombosis of Mesenteric Vessels H B Delatour Brooklyn.
5 Malignant Tumors of Mesentery P E Sawyer Sioux City Iowa
6 *Volvulus of Stomach H H Kerr Washington D C
7 Two Cases of Tumors of Ampulla of Vater H Upcott Hull England.
8 Clinical Diagnosis of Congenital Anomaly in Kidney and Ureter W I Braasch Rochester Minn.
9 Operative Procedure in Cancer of Prostate E Fuller New York
10 *Treatment of Fistula in Ano with Special Reference to Whitehead Operation A W Elting, Albany N Y
11 Salvarsan and Neosalvarsan Their Intravenous Injection E G Ballenger and O F Elder Atlanta Ga
12 *Ivory Dowel for Preserving Finger in Case of Enchondroma of a Phalanx Complicated by Fracture A Primrose Toronto
13 *Reduction of Fragments in Fractures of Long Bones J C A Gerster New York
14 Tying Knots or Ligatures and Sutures with One Hand G H Monks Boston
15 *Modification of Bartlett s Gastro-Enterostomy Clamp J J Buchanan Pittsburgh

1 **Tetany Following Thyroidectomy**—Shepherd says he always thought there was little danger of removing all the parathyroids or injuring them in performing total thyroidectomy, for he had in quite a number of cases removed the whole thyroid and in others left only the isthmus or a part of one of the lateral lobes, and he never saw a case of tetany or cachexia strumapriva However, last January he operated in a case in which he was forced to remove nearly all the thyroid, and this operation was followed by severe tetany In this case no trace of any parathyroids was found in a most careful examination of the removed gland so that he concludes that the parathyroids were so injured at the operation that they were rendered useless The third day the patient complained of a feeling of formication over the whole body and of a great weight which pressed on her brain She had slept well the night before and had a normal pulse and temperature Toward evening she complained of severe pain at the base of both lungs and next day felt dizzy and had numbness of the legs and feet On the fifth day, in the morning she felt fairly well but complained of numbness and tingling in the legs and face and a feeling as if ants were crawling over her skin A few hours later she had cramps in both hands and pains in the joints and considerable stiffness of the fingers and flexion of the toes Then there were severe paroxysms in both arms and legs The thumbs were contracted in the palm of the hand, the fingers flexed at the metacarpophalangeal joint, the wrist flexed, and elbows bent The toes were flexed and adducted and the feet extended She complained of great pain in the legs, which was at times spasmodically increased, her face twitched and there was numbness and stiffness about the jaws Chvostek's sign was well marked, and pressure on a nerve trunk produced spasms (Trousseau's sign) Pulse was 80 to 100, and she had no temperature Her voice was very husky and she seemed stupid, she complained most of the acute pain in the legs, which at times was very severe.

Shepherd put her on dram doses of the lactate of calcium every three hours This was about eleven in the morning and at 5 p m the spasms and cramps had disappeared, the fingers were relaxed, the voice became natural, and she said she felt very well, only tired After five doses the lactate of calcium was discontinued as she disliked it so The seventh day after operation, she began to feel the sensation of formication again, with a feeling of weight in front of head and great depression She was again put on calcium lactate, dram doses, with 2½ grains of thyroid extract, every four hours She had slight cramps in her extremities that night with pain in the left side Next day she was free from cramps but still had pressure symptoms in the head and a creepy sensation over the body For the next two days she remained about the same and refused to take any more calcium lactate On the eleventh day she was worse than ever, all previous symptoms being much exaggerated She was given 1/20 grain parathyroid extract, every four hours, with 3 grains of thyroid extract As she was no better next day she was persuaded to commence taking the calcium lactate again in addition to the extracts, and in consequence the improvement was rapid, the cramps disappeared, and she felt very much better The patient left the hospital on the twenty first day and was directed to take 30 grains of calcium lactate and 1/20 grain parathyroid extract every four hours Twice the lactate of calcium was discontinued and the symptoms always returned, though parathyroid was still administered This case agrees with the conclusions found by Voegtlin and MacCallum, that calcium can cure temporarily any case of tetany due to insufficiency or removal of the parathyroids.

2 **Treatment of Aortic Aneurysm** —Following the method used by his namesake, Macewen introduced a fine steel needle, highly polished, into the interior of the inner surface of the opposite wall of the aneurysm, so as to produce a series of slight abrasions of that surface In seven weeks, a needle was twice introduced and a large area of the posterior wall was treated. The patient expressed herself as feeling better after the treatment She returned to the hospital three months later, had a needle introduced once, remained in hospital for a month, and was able to go home in a cab She now felt so much better that she was able to walk a little, and go about and enjoy herself She returned to the hospital in October, 1910, remaining there for a month, and on this visit had two needles introduced simultaneously on two occasions, at an interval of a fortnight Thereafter patient began to feel very much better In July, 1912, patient expressed herself as feeling better than she had for many years back Not only can she go about freely, but she can go up and down stairs actively without assistance or inconvenience, she can perform ordinary light household duties, there is no pain nor choking sensation, and she further states that she has entirely recovered from severe headaches which had caused her much suffering prior to the appearance of the aneurysm Pulsation is still noted in the neck, as is to be expected, owing to the deep or posterior wall being the one which was treated, but it is not marked, and only becomes noticeable when patient is excited

3 **Primary Sarcoma of Peritoneum** —Four months before Venable saw this patient, the man was kicked by a horse in the right side of the abdomen just within the anterior superior iliac spine From this time patient had suffered pain and tenderness in this locality, but not, however, till about two and a half months after the injury did he suffer any digestive disturbances This presented as an intermittent diarrhea accompanied by anorexia and nausea and abdominal pains, from which time he dates the beginning of his loss of weight This continued for two or three weeks, when patient himself discovered a mass in his right iliac region, which is described as then feeling about the size and shape of a lemon and which was movable and not tender During the succeeding twenty four days it attained the size of two cantaloupes placed end to end Lost thirty four pounds in weight Complained of a dull ache in his right side and sense of weight Anorexia pronounced, accompanied by seizures of nausea but no vomiting Frequent stools, six to ten or fourteen daily, watery in character, some mucus and occasional traces of blood The abdomen was opened, exposing a neoplasm springing by a large pedicle, soft and vascular, from the peritoneum just over the brim of the pelvis, about two fingers' breadth to the outer side of the sacro iliac synchondrosis There were no other intestinal or mesenteric or omental attachments or adhesions Removal of the growth including the base of the pedicle was easy, after which further examination revealed no evidences of metastasis He was discharged on the eighteenth day The pathologist's report was "spindle cell sarcoma " The gross appearances of the tumor were typical of sarcoma In about three weeks after returning home, the patient suffered a recurrence of the diarrhea from which he had suffered prior to operation, accompanied progressively by anorexia, severe abdominal pains, and seizures of extreme nausea, which continued till the time of his death, Jan 26, 1912, a little over three months after his operation

6 **Volvulus of Stomach.**—Kerr's patient gave a history of frequent attacks of pain and indigestion after eating About one hour after eating the largest meal of the day the patient was seized with sudden cramps in his stomach Induced vomiting and deep, prolonged massage in the stomach region finally brought relief These attacks lasted about twelve hours, but the patient did not recover sufficiently to return to work for several days The patient admitted excessive, constant gin drinking, and is a tremendous eater, gulping his food without mastication On examination there was noticed a most remarkable distention of the upper abdomen, reaching from the ensiform cartilage to the umbilicus, and everting the costal arches, this tense swelling extended to the mammillary line on the right On palpation the limits of this mass extended slightly beyond those noted on inspection, it felt hard and very tense The abdomen below the umbilicus was not distended but the muscles showed some rigidity On percussion this distended area was highly tympanitic Heart action was rapid, weak and irregular, a beat was quite frequently dropped All attempts to pass the stomach tube was futile

The abdomen was opened The tense stomach was exposed not covered with omentum and was punctured with a large trocar Gas under great pressure escaped with a whistling sound, and the distention began to subside A catheter was then introduced in place of the trocar and a great quantity of gas and 54 ounces of brown grumous fluid were evacuated Incision, in what was thought to be the anterior wall of an acutely dilated stomach, was sutured with silk and the abdominal wound closed The abdomen had then resumed its normal contour, and the heart had moved back to its usual place The patient's condition, however, did not improve Death occurred fourteen hours after onset At the autopsy the stomach was found completely inverted and markedly dilated, so that the posterior wall became anterior, and the greater curvature was pressing against the diaphragm The gastrocolic omentum was torn free from the greater curvature of the stomach, and the transverse colon was found lying below the stomach After a careful review of the literature, Kerr found eight similar cases of true idiopathic volvulus

10 **Treatment of Fistula in Ano** —Of 105 consecutive cases on which Elting's report is based, ninety six were found to be histologically non tuberculous and nine histologically tuberculous Of the nine tuberculous patients, seven had demonstrable pulmonary tuberculosis at the time of the operation Of the 105 cases, sixty four occurred in males and forty one in females Arranged according to age, two occurred in the first decade, one of them in a child of 10 months, eight occurred in the second decade, thirty seven occurred in the third decade, thirty occurred in the fourth decade, fifteen occurred in the fifth decade, ten occurred in the sixth decade and three occurred in the seventh decade In practically all of these cases it had been possible to trace the subsequent history of the patients, and in all of them, so far as Elting has been able to determine, the fistulas have healed and remained well Some of the patients have died, but none from causes associated with the fistulas except in patients with pulmonary tuberculosis, four of whom have died There was no mortality associated with the operation In one case an abscess formed in one of the ramifications of the fistulous tract, which required incision about one month after the operation, but which subsequently healed and has remained well This was the only case in which any kind of a second operation was required

In seven of the cases some degree of stenosis or stricture developed subsequently, but all of these were cases with very extensive perirectal inflammation and necrosis, in most instances associated with bowel openings from 2 or 3 inches above the anal margin The use of hard rubber rectal dilators inserted by the patient once or twice daily effectually relieved the stricture in all of the seven cases, so that at this time none of them has occasion to use the dilators These strictures were the result of the extensive scar tissue due to the widespread inflammation One of these patients now has marked incontinence of feces due to an almost complete degeneration of the external sphincter muscle associated with partial degeneration of the internal sphincter Three others of these seven have more or less incontinence of feces, when the bowels are loose, due, so far as can be determined, to the same cause The remaining cases of the entire series have practically normal sphincteric function From several years' study and experience in the treatment of fistula in ano, Elting concludes that probably not more than 10 per cent of fistulae in ano are tuberculous and that a great majority of these are secondary to demonstrable tuberculosis elsewhere in the body, usually in the lungs The great majority of fistulae in ano originate from a diseased condition of the rectum existing in the lower 1½ inches, and that this diseased condition is usually a hemorrhoid The essential principles [illegible] of fis

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in ano consist in (a) the severance of the communication between the bowel and the fistulous tract and (b) the removal of the diseased portion of the bowel, including the fistulous opening A widespread and often destructive dissection and removal of the fistulous tracts in the perirectal tissues is unnecessary It is possible to cure fistulae in ano without injury to the sphincters and with a preservation of all the sphincteric function possessed prior to operation, by the application of the Whitehead principle of rectal excision

12 **Ivory Finger Dowel**—Primrose's patient had an enchondroma of the proximal phalanx of the index finger of the right hand Through this region a fracture had taken place An ivory peg was procured, 2 5 cm long and 3 mm thick, which was pointed at both ends An incision was made along the radial side of the phalanx and the bone exposed at the seat of fracture The tumor was removed by a curet, and then a longitudinal slit 4 mm wide was made in the compact tissue of the distal fragment, by means of a Dahlgren's rongeur forceps, the ivory peg was inserted and firmly secured in the center of the shaft of the bone, each sharp end being embedded in the cancellous tissue toward the articular extremities of the phalanx The wound was then closed and a splint of plaster of Paris applied Healing took place *per primam* Firm union of the fracture followed, and subsequently the patient was able to use the finger in his work as accountant The functional result as to movement and utility was perfect and it was difficult to detect any abnormality at the seat of former trouble

13 **Reduction of Fragments in Fractures**—Two methods for reducing fractures are described by Gerster One is a traction method in which he separates the fragments forcibly by means of a special apparatus (hook and chain) which overcomes overriding and makes accurate approximation possible The other is a reduction method After proper exposure and freeing, a Lowman clamp is applied to each fragment A turnbuckle is so inserted that the jaws at its ends engage the shafts of the clamps on either fragment As the barrel of the turnbuckle is rotated, the clamps (fragments) are forced apart When the turnbuckle has reached its maximum extension, a second longer turnbuckle is applied and continues the extension as far as necessary The turnbuckle's jaws are made loosely to fit the shafts of the Lowman clamps in order to permit of the fragments (which are out of line) being gradually brought into their proper relation

15 **Bartlett's Gastro Enterostomy Clamp**—The clamp described by Buchanan has a fixed center bar and a separate pair of thumb screws from each viscus This allows the fold of stomach to be fixed in place first between the fixed center bar and one of the movable side bars It thereafter requires no attention while the intestine is being fixed between the center bar and the other movable side bar To render it possible to slip the rubber tubing over the middle bar and to facilitate removal, the latter is made in two sections, which are screwed together after the tubing is applied, and require to be separated for removal of the clamp after the anastomosis has been made

Archives of Pediatrics, New York

October XXIX No 10, pp 721 8[illegible]

16 *Infant Milk Depots R G Freeman New York
17 Acute Yellow Atrophy in Child [illegible] Years of Age [illegible]
Huber New York
18 Various Meningitides Their Dia[illegible]nosis and Treatment W [illegible]
Lucas Boston
19 Blindness as Result of Inflammatory Diseases Affecting Conjunctiva and Cornea [illegible] W Cutler New York
20 Hemophilia Neonatorum in Family of Four Infants R [illegible]
Pitfield Germantown Philadelphia
21 Congenital Hydronephrosis with Aplasia of Ureter [illegible] Van Der Bogert [illegible]

16 **Infant Milk Depots**—The ideal milk depot in [illegible] opinion is one equipped with rooms for preparing the milk, pasteurizing it in the nursing bottles and distributing it from [illegible] depots very near the home of the mother at cost or to the destitute free The ideal equipment for accomplishing this would be a large plant for preparing and pasteurizing the milk, with a consulting room and dispensing room attached and with refrigerator wagons for transporting the milk There should also be a number of sub stations for distribution and consultation, with still more sub stations for distribution only Each of the consulting stations should be provided with a physician, who would spend certain hours there each day, and a nurse, who would spend all her time on the work in the depot and the homes This scheme provides the most economical method of preparing and distributing the milk It provides consulting rooms, where the mother may take her baby once a week for weighing and for advice, as well as nearer distributing stations where the milk may be obtained on other week days without going as far as the consulting station. Very efficient work can be done with less equipment, where the funds are limited, when certified milk is distributed and clinics are held by physicians and nurses are provided who are active in the milk depots and at the homes Thus the New York *Diet Kitchen Association* which, with a small income from subscriptions and endowment, was doing a very limited work in dispensing milk to babies and invalids, has recently rapidly expanded its work through a policy of charging those who can afford to pay, so that during the past year, with an income of some $82,000, $45,000 of which was contributed by the mothers who bought the milk, they have been able to dispense more than a million quarts of milk from nine stations, and their results have been wonderfully good Consultations with physicians are held, and trained nurses have been attached to some of the depots and will soon be attached to all The mortality in the patients treated at these depots has been extremely small Of 2,421 babies under their care between June and October last, four months, including the summer months, they report only thirty deaths from all causes, a mortality of 12 to 10 per cent for these hot summer months Where funds are available the scheme first mentioned should be carried out As to the results of milk depots in lowering mortality, it has been found that where they are generally established so as to supply all the babies that need their help a reduction of about 60 per cent is obtained.

Boston Medical and Surgical Journal

November 14, CLXVII No 20, pp 675 714

22 *Traumatisms of Cranium and Spinal Column Neurologic Aspects of Injuries to Cranium and Spinal Column E W Taylor Boston
23 *Idem Surgical Treatment of Head Injuries Affecting Brain J Homans Boston
24 Idem Surgical Treatment of Injuries of Spinal Column Affecting Cord J T Bottomley Boston
25 New Device for Safe and Certain Administration of Salvarsan W J McGurn Boston
26 Unusual Anomaly of Hands (Polydactylism) H W Goddall Boston

22 **Neurologic Aspects of Injuries to Cranium and Spinal Column**—From a study of the clinical disturbances and pathologic findings in traumatic injuries of the cord, Taylor concludes that hemorrhage external to the cord is unusual and need not be seriously considered in deciding on [illegible] concussion of the cord without [illegible] possibility that [illegible] microscopic le[illegible] ing th[illegible] the damage to the cord is immediat[illegible] [illegible] injury that delay in operation is advisa[illegible] operation is unavailing when signs of complete t[illegible] lesion persist and that laminectomy may help toward[illegible] tion of the functions of a partially damaged cord

23 **Surgical Treatment of Head Injuries Affecting** [illegible] Unless there is pressure to be relieved hemorrhage stopped or fluid to be drained off Homans says there [illegible] ing to be gained by operation In properly selected cas[illegible] ever the following results are to be expected An ede[illegible] swollen brain is given sufficient room so that it is n[illegible] pressed In such a case rapid recovery is probable Bl[illegible] from ruptured meningeal vessels is removed and hem[illegible] is stopped Here rapid recovery is to be expected Whe[illegible] cussion and laceration exist together the brain is n[illegible] given more room but blood and cerebrospinal fluid, [illegible] longer properly disposed of may be drained away [illegible] recovery is uncertain and slow Finally, and in general, [illegible] ery in all kinds of cases is tremendously hastened and [illegible] is some reason to believe that many of the late ne[illegible] epilepsy or other mental defects, so greatly dreaded b[illegible] are done away with

Illinois Medical Journal, Springfield

November XXII No 5 pp 541 648

27 Some Accidents and Complications Attending or Shortly Following Extraction of Senile Cataract C Wood Chicago
28 Use of Conjunctival Flap in Perforated Wounds of Eyeball G F Suker Chicago
29 Significance of Arteriosclerosis in Fundus Oculi [illegible] Hill Chicago
30 Prevention of Blindness and Conservation of Vision T A Woodruff Chicago
31 Treatment of Corneal Ulcers. C A L Lesage Dixon
32 Hemorrhage as Cause of Blindness C B Welton Peoria
33 Treatment of Secondary Divergent Strabismus H W Woodruff Joliet.
34 Traumatic Dislocation of Crystalline Lens Without Rupture of Eyeball with Report of Case C I Burkhardt Effingham
35 Chicago Epidemic of Septic Sore Throat with Special Reference to Its Pathology and Bacteriology D J Davis Chicago
36 Septic Infection of Throat M T Goldstine Chicago
37 Artificially Deformed Skulls with Special Reference to Temporal Bone and Its Tympanic Portion W P McGibbon Chicago

Journal of Biological Chemistry, Baltimore

November XIII, No 2 pp 111 280

38 Tryptic Proteolysis of Cynoscion Regalis. G F White and A Thomas Woods Hole Mass
39 *Formation of Glycocoll in Body A A Epstein and S Bookman New York
40 *Comparative Efficiency for Growth of Total Nitrogen (Amid) from Alfalfa and Corn E B Hart C C Humphrey and F B Morrison Madison Wis
41 *Animal Calorimetry Influence of Ingestion of Amino Acids on Metabolism G Lusk New York
42 *Idem Influence of Mixtures of Food Stuffs on Metabolism G Lusk New York
43 Creatin Metabolism of Growing Pig E V McCollum and H Steenbock Madison Wis
44 Synthesis of Lecithin in Hen and Character of Lecithins Produced E V McCollum J C Halpin and A H Drescher Madison Wis
45 Metabolism Studies on Cold Blooded Animals Urine of Fish W Denis Boston
46 *Maintenance Experiments with Isolated Proteins T B Osborne and L B Mendel New Haven Conn
47 Kyrine Fraction Obtained on Partial Hydrolysis of Proteins P A Levene and F J Birchard New York

39 **Formation of Glycocoll in Body**—The experiments recorded by Epstein and Bookman did not afford any definite evidence of the conversion of native leucin into glycocoll. In the absence of such evidence it appears likely that much of the glycocoll liberated on feeding benzoic acid is the result of a synthetic process in the body.

40 **Efficiency of "Amid Nitrogen" for Growth**—This paper includes the records of the comparative efficiency of nitrogen from alfalfa hay and the corn kernel for growth. Also data on the relation of creatinin output to nitrogen storage in heifers. On the basis of total nitrogen ingested the utilization of nitrogen for growth was as efficient when the [illegible] was from alfalfa hay as when it came from the corn kernel. With high intake of total digestible crude protein [illegible] the case of alfalfa includes the "amid nitrogen" the storage of nitrogen was essentially alike on the two rations. There was no sudden decrease or increase in the nitrogen [illegible] of the urine or feces when the animals were suddenly changed from one ration to the other. This is evidence that the "amid nitrogen" was being used in the same way as the true protein nitrogen. It is apparent from these data that full [illegible] for growth, can be given to the total nitrogen of alfalfa [illegible]. The "amid nitrogen" should not be considered [illegible] influence on milk production will be studied later. [illegible]ing heifers there was no very concordant [illegible]put with increased storage of nitrogen. [illegible] possibility of using this index for the [illegible] of the efficiency of a given source of nitrogen [illegible]gen storage.

41 **Metabolism of Amino Acids**—[illegible] opinion that the increase in metabolism [illegible] meat is due to the [illegible] action of [illegible] on the cellular protoplasm.

42 **Metabolism of Mixtures of Food Stuffs**—[illegible] cludes that there are the following [illegible] quiet or sleeping dog [illegible] A basal metabolism, [illegible] stream which [illegible] but the composition of [illegible] the body, (2) [illegible] increased quan[illegible] blood on account of absorption from the intestine, and (3) a metabolism due to the stimulus of amino acids. The metabolism of plethora and the metabolism of amino acid stimulation cannot be added to each other; there is no summation of effect when both influences are brought into action simultaneously. In other words the level of cellular oxidation induced by plethora is not further heightened by the stimulus of amino acids, unless the latter alone would accomplish such increase in activity.

46 **Maintenance with Isolated Proteins**—The authors' experimental records suggest that in the past the possibility of a transmutation or synthesis of amino acids in the organism has been greatly underestimated, and that these chemical processes may play a more significant part in nutrition than has been credited to them hitherto. The realization of the possibility of a transmutation of amino acids has an obvious bearing on the question of the quantity of protein in the diets, for the arguments in favor of a liberal protein intake have in part been based on the belief that all of the "Bausteine" must be supplied in adequate amounts. To what extent the daily "wear and tear" of metabolism may require a new supply of Bausteine to replace depleted tissue, remains a matter of conjecture at present. Studies to determine the amount of nitrogenous material involved in what Rubner has termed the "Abnutzungsquote" show that it is not large in quantity. The experiments here recorded give no answer to the possible extent of the synthesis of new amino acids, except, perhaps, in the case of glycocoll and lysin. Further investigations with the various proteins must be undertaken to determine the relative minimum quantities of each of them essential for long continued maintenance.

Journal of Iowa State Medical Society, Clinton

November 15, II, No 5, pp [illegible]

48 Surgical Operations Outside of the Hospital [illegible]
49 [illegible]
50 *[illegible]
51 [illegible]
52 [illegible]
53 [illegible]
54 [illegible]
55 *[illegible]
56 [illegible]

[illegible]

Journal of [illegible] State Medical Association, [illegible]

November, IX, [illegible]

[illegible]

[illegible]

[illegible]

Laryngoscope, St Louis

October, XXII, No 10, pp 1157 1236

66 Sphenoidal Sinusitis in Relation to Optic Neuritis J P Tunis Philadelphia
67 Artificially Deformed Skulls with Special Reference to Temporal Bone and Its Tympanic Portion W McGibbon, Chicago
68 Hypophyseal Tumor from Rhinologist s Point of View G McBean Chicago
69 Tuberculosis of Tongue S Von Ruck Asheville N C
70 *Some Untoward After Effects of Too Radical Tonsillectomy J A Stucky, Lexington Ky
71 *Three Cases of Acute Follicular Tonsillitis with Unusual* Sequela S McCullagh New York
72 Anesthesia for Peroral Endoscopy C Jackson, Pittsburgh
73 Direct Laryngoscopy in Removal of Laryngeal Tumors R H Johnston Baltimore
74 Three Cases of Foreign Body in Bronchus S Yankauer New York
75 Esophagoscopy in Removal of Foreign Bodies from Esophagus R McKinney Memphis
76 Stricture of Upper End of Esophagus M E Holmes Boston
77 Split Mask for Administration of Anesthetics During Operations Within Mouth S Iglauer, Cincinnati

70 **After-Effects of Too Radical Tonsillectomy** —Complete tonsillectomy, according to Stucky, should be advocated as a routine procedure He claims that tonsillectomy should be regarded as a major operation and as such should be performed in a hospital with careful surgical technic. In many, probably in the majority of cases where tonsillectomy is performed, there is more or less injury done to the pillars of the fauces In removing the tonsils and capsule some shreds of muscular tissue are usually cut or torn off and are adherent to the removed gland Even should this not occur, the muscle is left uncovered, hence unprotected, over the area to which the capsule of the tonsil was adhered. Tonsillectomy is not a simple operation nor is it free from danger, yet it is being performed more frequently by general practitioners and embryo specialists than any operation in surgery Stucky has seen one case of facial paralysis lasting for five weeks This patient was operated on by a well known laryngologist, and there was a cellulitis following the operation Two months after, the cicatricial tissue between the anterior and posterior pillars had the appearance of that so often seen following syphilitic ulceration He has seen three cases in which a claim was made of marked impairment of the voice, especially of the high tones

In two other cases the pillars of the soft palate were out of alignment due to cicatricial contraction, causing tension and interference with palatal movements, making swallowing a discomfort The anterior and posterior pillars were matted down by adhesions, causing the traction to be so great around the fossa of Rosenmueller as to cause a partial closure of the eustachian tube with subsequent tinnitus In three other cases the uvula had been caught in the loop of the snare as it was being placed around the tonsil and was removed with the tonsil In two other cases there was a loss of tonicity of the tensor palati and levator muscles, which resulted in the regurgitation of fluids through the nares, lasting for several weeks This was evidently due to the great traction made with the tonsillar forceps which was necessary to pull the tonsil out so as to make a dissection There was one case of fatal hemorrhage a few hours after the operation, two cases of cellulitis involving the entire neck, and nine cases of secondary hemorrhage requiring a second anesthesia and tying a spurting vessel or plugging the space between the pillars and sewing the pillars together

Maryland Medical Journal, Baltimore

November LV No 11 pp 261 286

78 Some Laryngoscopic Bronchoscopic and Esophagoscopic Cases R H Johnston Baltimore
79 Medical Fathers of Baltimore County Maryland W J Todd, Mt Washington
80 Rural Sanitation or Physical Betterment in Country Life C W G Rohrer Baltimore.

Medical Record, New York

November 16, LXXXII No 20 pp 879 924

81 *Operation for Extreme Cases of Uterine Procidentia with Rectocele and Cystocele J R Goffe New York
82 Some Practical Points in Interpretation and Management of High Blood Pressure E E Cornwall Brooklyn
83 Modified Radical Mastoid Operation for Cure of Otitis Media Purulenta Chronica W S Bryant, New York.
84 Parinaud s Conjunctivitis J S Kirkendall and C. P Fitch Ithaca N Y
85 Roentgen Ray Therapy H E Smith Norwich, N Y
86 Significance of Some Urinary Constituents J B Ogden New York.
87 Congenital Stricture of Ureter Producing Pyonephrosis, Nephrectomy L M Kahn New York
88 *Poisoning by Scarlet Red H H M Lyle New York
89 Pregnant Woman, Tuberculosis and Safety D H Stewart New York

81 **Operation for Procidentia, with Rectocele and Cystocele** —In Goffe's operation the underlying motive is to restore not only anatomic structures, but also physiologic function In the first class of cases, after attending to any minor lesions, the uterus is restored to its normal position by shortening the round ligaments through the vagina, and in extreme cases the utero sacrals as well This is done with the prominent idea in view of reconstructing the normal anatomic arrangement and thereby reestablishing the important function of the uterus and broad ligaments as a deflecting plane of intra abdominal pressure In dealing with the cystocele, the effort has been made to observe with scrupulous care also the anatomy, function, and topographic position of the bladder The trigone of the bladder is spread out and made fast to the anterior face of the uterus and broad ligaments, by carrying the base of the bladder up and stitching it at three points, one stitch at each cornu, and one in the median line at the center of the anterior face of the uterus The uterovesical peritoneal fold is restored as well as the hinges on which the dome of the bladder moves in its function of receiving and discharging the urine This gives a fixed point of exit for the urine and a rigid canal in the passage of the ureters through the wall of the bladder

In the restoration of the floor of the pelvis Goffe uses the method of distinct isolation of the levator ani muscles and stitching them together with buried sutures

In the second class of cases, that is, in patients at, near, or beyond the menopause, unless there is positive objection on the part of the patient the uterus is removed per vaginum In order to restore the deflecting plant of tissue the broad ligaments are stitched together across the pelvis from the infundibulopelvic and round ligaments down to cardinal ligaments In this procedure a plane of tissue is restored in exactly the same situation and under control of the same ligaments as under normal conditions This deflects from its posterior surface back into the pelvic outlet, the intraabdominal pressure, and thus physiologically takes place of the original structures On its anterior face it also affords a surface on which to spread out and fix the trigone of the bladder, restoring its hinges and all its physiologic functions The floor of the pelvis is restored in the usual manner

88 **Poisoning by Scarlet Red** —Lyle's case was that of a woman, 50 years old, suffering from extensive burns of the anterior chest, both forearms and wrists, caused by exploding benzine They were treated by the dry method until the sloughs separated A scarlet red ointment (8 per cent scarlet red in U S P boric acid ointment) was applied to a small portion of the granulated edges As the wound reacted kindly the area of application was extended. On the sixteenth day of the employment of the scarlet red ointment the patient complained of headache, dizziness and general faintness The following morning she was seized with severe cramp like pains in the epigastrium, was intensely nauseated, and vomited violently The pain was accompanied by tenderness in the upper right quadrant of the abdomen, the maximum point being *in the region of the pylorus, the temperature rose to 102 F*, the pulse to 120, the blood count showed a slight leukocytosis, urination was frequent and painful, the urine showing albuminuria but not casts Despite gastric sedatives and lavage the nausea and vomiting persisted for ten hours The violent onset coupled with the pain and tenderness in the upper abdomen, suggested the possibility of a duodenal perforation However the low blood count, the lack of abdominal rigidity, and the peculiar intensity of the nausea pointed to some form of poisoning rather than to a perforation After the discontinuance of the scarlet red and the employment of repeated stomach and colonic washes the symptoms gradually subsided One week later the scarlet red was again applied to a small area, and gradually increased until two thirds of the circum

ference was covered The same toxic symptoms appeared, but of a milder degree, and again disappeared on the withdrawal of the scarlet red After a second interval of rest the scarlet ointment was applied in a 4 per cent strength, no further toxic symptoms developed Throughout the treatment there were no signs of local wound irritation Four months after admission to the hospital the patient was discharged cured

New York Medical Journal

November 16 XCVI No 20 pp 993 1048

90 Infant Feeding L. Fischer New York
91 *Salvarsan in Leprosy C Wellman New Orleans
92 Heliotherapy A. M Forbes and G G Copeland Montreal
93 Removal of Ureteral Stone by Cystoscopic Methods B Lewis St Louis
94 Angioma of Pons G R. Lafora Madrid Spain
95 Venereal Diseases Sanitary and Social Problem F Bierhoff New York
96 Rational Therapy of Syphilis in Light of Recent Investigations J S Eisenstaedt Chicago
97 Review of Newer Methods of Diagnosis in Cancer M J Sittenfield New York.
98 Deformities of Nose F S Lovell New York

91 **Salvarsan in Leprosy**—In the case of four or five patients the administration of salvarsan by Wellman resulted in clinical improvement The other case ended fatally from the result of accidental burns before observations could be completed. Two cases in which the disease was least advanced showed the best results One of the controls remained unchanged in condition and the other grew steadily worse and finally died In one case, *Bacillus leprae* disappeared from the nasal secretion after treatment. Four patients showed partial or complete resolution of the specimen nodules examined after treatment

Northwest Medicine, Seattle, Wash

November 11 No 11 pp 325 356

99 Micrococcus Catarrhalis Infection of Urethra Resembling True Gonorrhea L. Buck Portland Ore
100 Treatment of Pus in Urine G S Whiteside Portland Ore
101 Treatment of Ruptured Appendix. W B Holden Portland, Ore
102 Surgical Treatment of Constipation A E Rockey Portland Ore
103 Treatment of Pneumonia J H Bristow Portland, Ore
104 *Vaccine Treatment of Rheumatism. A W Moore Portland Ore
105 Rationale of Treatment of Typhoid with Vaccine W F Amos Portland Ore
106 Few Don ts" in Obstetrics G Parrish Portland Ore
107 Treatment of Toxemia of Pregnancy J M McGaven Portland Ore
108 Treatment of Psoriasis G H Douglas Portland Ore
109 Treatment of Whooping-Cough J B Bilderbach Portland Ore
110 Treatment of Cross Eyes in Children F A Kiehle, Portland, Ore
111 Use of Culture Products in Treatment of Tuberculosis. C C Browing Los Angeles Cal

104 **Treatment of Rheumatism.**—Summing up the treatment of rheumatism, Morse says, prevent the bacteria from entering the system, rest in bed, immobilize the joints affected with great pain, ascertain which specific bacterium causes the trouble and use its bacterin The salicylates either alone or in connection with the latter, abundance of fluids by the stomach, together with counter irritants, will offer about as much as can be given for this affliction

Texas State Journal of Medicine, Fort Worth

November VIII No 7 pp 181 204

112 Simple Rules for Effective Teaching and Safe Practice of Obstetrics. H Schwarz St. Louis
113 Plea for Square Deal for Patient R R White Temple
114 Relation of General Practitioner to Surgical Diagnosis J E Dildy Lampasas.
115 Treatment of Chronic Suppuration of Nasal Accessory Sinuses J H Foster Houston.
116 Gangrenous Appendix. W H Walker Wichita Falls
117 What Shall We Do to Be Saved? A B Leeds Chickasha Okla.

West Virginia Medical Journal, Wheeling

November VII No 5 pp 147 180

118 Some Modern Factors of Safety in Surgical Operations J S Horsley Richmond Va
119 Suggestions to Medical Society J Schwinn Wheeling
120 Management of Cases of Ophthalmia Neonatorum H McGuire Winchester Va
121 Surgery of Biliary Tract G C Rodgers Elkins.
122 Personal Observations in Practice E Walker Tunnelton
123 Liver Cirrhosis in Boy of Four Years G R Davis McDonald
124 Radical Treatment of Acute Gonorrheal Epididymitis W S Robertson Charleston
125 Antityphoid Vaccination. M. P Ravenel Madison Wis.

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

November 2 II No 2705 pp 1173 1260

1 *High Blood Pressure Its Associations Advantages and Disadvantages Sir W Osler
2 *Calculation of Drug Dosage for Children W J Dilling
3 Successful Removal of Tumor in Adrenal H T Mursell
4 Some Experiments with Ionic Medication N S Finzi
5 Case of Uremia Treated by Morphin A H Carter
6 Two Cases of Peptic Ulcer of Esophagus C G Watson
7 Trypanosoma Rhodesiense J W W Stephens and H B Fantham
8 Identity and Mode of Transmission of Trypanosomes F K. Kleine
9 Trypanosoma Rhodesiense and Trypanosoma Gambiense F Mesnil
10 Trypanosomes Infecting Game and Domestic Stock in Luangwa Valley Northeastern Rhodesia. A Kinghorn and W Yorke
11 Pathologic Histology of Trypanosomiasis S B Wolbach and C A L. Binger
12 Organisms Isolated from Lesion of Human Leprosy C Duval
13 Problem of Leprosy M E Marchoux
14 Comparative Experimental Study of Leprosy Cultures of Clegg Duval Kedrowsky Rost and Williams H Bayon
15 Kala Azar Problem W S Patton
16 Some Experimental Facts on Kala Azar (Indian) R Row
17 Some Insect Flagellates and Problem of Transmission of Leishmania H B Fantham
18 Demonstration of Specimens Relating to Transmission of Artificial Cultures of Leishmania Infantum to Mice and Rats H Bayon
19 Sanitation of Agricultural Estates in Tropics M Watson W C Brown W F Law K. S Wise and E P Minett
20 Helminthic Toxins M Weinberg
21 Blood Determination in Case of Katayama s Disease Bassett Smith
22 Importance of Hyphomycetes and Other Fungi in Tropical Pathology A. Castellani.
23 Copra Itch A. Castellani.
24 Treatment of Elephantiasis of Legs by Lymphangioplasty F C Madden A Ibrahim and A R. Ferguson

1 **High Blood Pressure.**—Of drugs says Osler, none are entirely satisfactory in chronic hypertension Nitrites in various forms may be used, and are often of temporary benefit, but he thinks the general opinion now is that neither the nitrites nor potassium iodid are of permanent benefit, though now and again one meets with an instance in which the prolonged use of potassium iodid is followed by marked lowering of the pressure A preparation of mistletoe has also been much lauded, but it, too, is very variable in its effects Osler advises caution in this point—if the patient does not feel so well, and begins to get thin and look badly, stop all drugs, trust to general measures and let the pressure rise In the robust man of full habit in the hypertensive crises with headaches, dyspnea or angina, a free venesection is indicated, to be followed by mercurial and saline purges

2 **Calculation of Drug Dosage for Children**—The method suggested by Dilling for the metric system $\frac{\text{Age} \times 5}{100}$, or for the imperial system $\frac{\text{Age}}{20}$ results in doses which correspond closely with those demanded by the average weights of nonadult individuals of both sexes at different ages Using 100 as the denominator and 20 as the adult age, thus, the formula $\frac{\text{Age} \times 5}{100}$ gives a curve which lies for the greater part of its course between the percentage weights of males and females Such a fraction is extremely easy to calculate when metric weights are in use Thus, if 0 33 gram be the adult dose the dose for a child of 7 is 0 1155 gram obtained by multiplying 0 33 by 35, and shifting the decimal points two places to the left

Lancet, London

November 2 II No 4653 pp 1199 1270

25 Eugenics "Unto the Third and Fourth Generation J G Adami
26 *Importance of Examining Urine Bacteriologically W H White
27 *Histology of Experimental Rheumatism C Coombs R Miller and E. H Kettle
28 *Analysis of Injuries to Bones at Wrist R Knox and R W A Salmond
29 Auricular Fibrillation C E Lea
30 Case of Auricular Fibrillation and Pregnancy C H Miller

26 **Bacteriologic Examination of Urine**—The importance of a bacteriologic examination of the urine is emphasized by

White, and he cites a number of cases to prove the correctness of his contention He points out that the contamination of urine by microorganisms, even when it is withdrawn from the bladder with aseptic precautions, is not uncommon, and females are more affected than males, the right kidney is much more frequently implicated than the left, and *Bacillus coli* is by far the commonest microorganism Various treatments of the illness associated with *Bacillus coli* in the urine have been advised, and in estimating their value regard must be paid to the great variation in the severity of the cases and to the fact that some get well without any treatment The patient should certainly be put to bed and have plenty of fluid to drink Those who attach much importance to the state of the intestinal tract will if there are any symptoms that this is disordered, try to get into a healthy condition. Alkalies have been largely used, and some think with great benefit They are given because it is thought that *Bacillus coli* will not grow in an alkaline fluid, but in reality it will grow equally luxuriantly in either alkaline or acid urine White's usual treatment is to give plenty of hexamethylenamin, say, 10 grains dissolved in water four or five times a day for an adult, together with from 10 to 20 grains of acid sodium phosphate dissolved in water every hour the patient is awake so as to keep the urine acid, for hexamethylenamin acts by the liberation of formaldehyd He usually also uses an autogenous colon vaccine, giving an adult from 3,000,000 to 5,000,000 for the first dose, a second similar dose is given three days afterward, and later from 20,000,000 to 50,000,000 are given once a week Even with the most thorough treatment, it is often difficult or impossible to get rid of the microorganisms from the urine, but that seems to White the very reason why every means should be taken, and therefore he uses vaccines as well as urinary antiseptics Certainly patients benefit while on this treatment, although often the illness passes away, but the microorganisms remain in the urine When this is so it may be that the bacilli having changed their character, a fresh, autogenous vaccine is desirable, but, he says, we must have a much larger experience before we know whether a change of vaccine causes the bacilli to disappear more rapidly than they would if vaccines were discontinued altogether after the subsidence of symptoms

27 **Histology of Experimental Rheumatism**—The authors have attacked this problem afresh from the histologic point of view Do the rabbit lesions which follow inoculation with streptococci isolated from human rheumatism correspond microscopically with those of human rheumatism or not? Their results hitherto have been few, but such as they are they enable them to reply to this question in the affirmative Inoculation of rabbits with streptococci recovered from cases of rheumatic infection provoked arthritis, carditis and other lesions Histologic examination of these lesions discovered (*a*) that they are identical with similar changes provoked in rabbits by inoculation with a similar microorganism in the hands of other investigators, (*b*) that they include all the phenomena, even the submiliary *nodule, found* in the rheumatic lesions of man Such differences as exist between the experimental rheumatic infection and the human variety are accounted for by a difference in the mode of entry of the infective agent in the two conditions

28 **Injuries to Bones at Wrist.**—The analysis of 214 cases by Knox and Salmond has shown that the most common injury at the wrist in cases in which the epiphyses have joined their shafts is a transverse fracture one half inch above the lower end of the radial bone the lower fragment being displaced backward and with or without a fracture of the styloid process of the ulna, while in cases in which the epiphyses are not yet united, the commonest injury is a transverse fracture about 1 inch above the lower ends of both forearm bones and with both lower fragments displaced backward

Clinical Journal, London

October 2 XL No 26 pp 401 416

31 Treatment of Hemorrhage M Smith
32 Diagnostic Value of Sensory Changes in Diseases of Nervous System H Head

October 9, XL No 1 pp 1 16

33 Diseases of Pleura C Wall
34 Three Demonstrations on Methods of Investigating Gastric Diseases W L Brown
35 Flat Foot R C Elmslie

October 16 XLI No 2, pp 17 32

36 Syphilis of Nervous System in Infancy Childhood and Early Adult Life S A Owen
37 Diseases of Pleura C Wall

October 23 XLI No 3, pp 33 48

38 *Treatment of Bronchitis in Stout and Elderly H Campbell
39 Methods of Investigating Gastric Disease W L Brown
40 Syphilis of Nervous System in Infancy Childhood and Early Adult Life S A Owen

October 30 XLI, No 4 pp 49 64

41 Methods of Examination of Ophthalmic Cases M L Hepburn
42 Syphilis of Nervous System in Infancy Childhood and Early Adult Life S A Owen

38 **Treatment of Bronchitis**—As to the treatment of a stout patient suffering from acute bronchitis, Campbell says First of all, give him cool fresh air to breathe Next, order a tube of oxygen to be at hand Apply a dozen leeches over the liver and encourage the flow of blood by subsequent hot fomentations Order 5 gr of calomel and a mixture containing carbonate of ammonia and senega As for the edema, the most effective way of getting rid of it is by means of digitalis and theocin sodium acetate (5 gr *ter in die*) As regards food it should in all cases of this kind be practically withheld altogether for a few days at least Starve the patient Campbell says many lives are sacrificed through ignorance of this common sense precept Every particle of food which is absorbed goes to increase the *production of carbonic acid, and it is the* excess of this in the blood which causes the dyspnea The patient may drink as much water as he likes, or he may have weak tea

As to the treatment of chronic bronchitis in an obese subject The air the patient breathes shall be as pure as possible, and endeavor should be made to bring about a vigorous circulation of healthy blood throughout the body As regards climate, a pure, dry, warm air is the best Cold air is not in itself bad for the lungs, it has rather a stimulating effect The injurious effect of cold climate, especially a cold damp climate, on the respiratory mucous membrane depends on its unfavorable effect on the skin The skin excretes less actively in a *cold damp than in a warm dry climate The respiratory* mucous membrane and the skin are to some extent complementary to one another, and if the action of the skin is checked, much of the poisonous material which is normally eliminated by it is got rid of by the respiratory membrane, which in this way may be irritated into inflammation The bronchitic therefore does best in a warm, dry climate

The promotion of a vigorous circulation of healthy blood is secured by common sense means Get the patient down to his normal weight Have recourse to diabetic diet and prescribe a due amount of exercise The withdrawal of starch and sugar is often followed by a considerable improvement in digestion and a reduction in the generation of poisons which by *their absorption into the blood* exercise *so injurious an* effect on the bronchial mucous membrane Such starch as is allowed should be chewed very thoroughly, so as to secure, as far as possible, its predigestion in the buccal cavity In this way much of it may be converted into dextrins, and some of it even into maltose, before it reaches the stomach A favorite plan of Campbell's is to order the patient a grain of grey powder and a teaspoonful of castor oil (in the form of a tasteless emulsion) every night for some months or, instead of the oil we may find it better to give half an ounce to 1 ounce of paraffin As regards expectorants, alkalies and ether are probably the best The part of expectorants in the treatment of bronchitis is, however, a subsidiary one Too great reliance has been placed on them in the past to the neglect of common sense measures Bronchitis has never been cured by drugs, any more than dyspepsia has, but it often yields to common sense treatment, and no variety more so than the chronic bronchitis of the elderly stout person Campbell believes that there is a danger that as we become more scientific we may neglect the more prosaic dictates of common sense.

Medical Press and Circular, London

October 2 XCIV No 3830 pp 343 368

43 Pneumococcal Meningitis Lafforgue.
44 Clinical Significance of Albumin Reaction in Sputum M Fishberg
45 Subphrenic Abscess F Jeans
46 Rupture of Intestine in Hernial Sac. R A Stoney
47 Relationship of National Insurance Act to Voluntary Hospitals Especially Those with Attached Medical Schools W M Eccles

October 9 XCIV, No 3831 pp 369 394

48 Decompression Operation for Cerebellar Tumor A A McConnell
49 * Penny Signs in Pleurisy and Ascites M Brelet
50 Eye-Strain and Its Detection in Practice S Stephenson
51 Medical Men and Contract Practice H B Grimdale

October 16 XCIV No 3832 pp 395 420

52 Plaster-of Paris in Surgery W C S Stevenson
53 Some Practical Points in Treatment of Eczema G S Stopford Taylor
54 Clinical Importance and Significance of Acidosis in Diabetes H Montlaur
55 *Carcinoma of Breast S J Ross

October 23 XCIV, No 3833 pp 421 448

56 Two Cases of Acromegaly T G Moorhead.
57 Passing of Morbid Anatomy J F Goodhart
58 Widening of Scope of Abdominal Surgery from Life-Saving to Health Restoring Operations. A E Giles.
59 Pulmonary Tuberculosis and Medical Gymnastics F Sylvan

October 30 XCIV No 3834 pp 449 476

60 Treatment of Icterus G Hoppe Seyler
61 Diet in Nervous Disorders T A Williams
62 Bacteriology of Uterine Cavity Fibromyomatous Disease C H S Webb
63 Colloid Selenium in Treatment of Cancer M Laurent and J Bohec

49 **"Penny Signs" in Pleurisy and Ascites**—Many years ago Professor Pitres of Bordeaux called attention to a new sign in pleurisy with effusion based on the transmission of the sound obtained by tapping one coin on another, which he called the "*signe du sou*" Brelet says that Pitres' sign is often of the greatest assistance in the diagnosis of pleural effusion, often a matter of some delicacy To elicit Pitres' sign in a case of pleurisy with effusion, a coin is placed flat on the chest, in front, just below the nipple, and an assistant taps it with another coin, striking vertically While this is being done the observer listens over the back and side of the thorax If the interior of the thoracic cavity be occupied by a homogeneous medium, either solid or liquid, which conducts sound more perfectly than normal pulmonary tissue, the percussion sound is audible as a clear ringing silvery vibration The "penny sign" is, therefore, not pathognomonic of pleural effusion, but as massive indurations of the pulmonary parenchyma are much more uncommon than pleural effusions this sign taken in conjunction with the more or less complete series of other signs and symptoms, will, in most instances, indicate the existence of a liquid effusion into the pleural cavity In a normal abdomen the "penny sign" is negative In obesity the penny sign is always negative, one gets a sound like that of bronze In meteorism and tympanism the results are the same In ascites, of which the author gives thirty five instances, the result in thirty one cases was very obviously positive that is to say, he heard a clear, silvery sound In four cases it was doubtful or faintly positive It follows therefore that when there is a mass of fluid between the two points the transmitted sound is clear and silvery in tone With regard to the cases in which the result was doubtful it is to be noted that in one of them the ascites was very abundant and under great pressure so that possibly the heightened tension hindered the transmission of the sound In the other instances it may be that peritoneal adhesions fixed the loops of the intestine, locking up the effusion into compartments and thus interfering with the production of the "penny sign" In most of these cases it was found possible, by shifting the point of percussion and auscultation, to demonstrate the limits of the effusion

55 **Carcinoma of Breast**—Ross firmly believes that as the precancerous stage of cancer is inflammatory, all breasts affected with chronic mastitis after the patient has reached fifty years should be removed No breast tumor should be regarded as simple until it has been proved so by microscopic examination The sooner we cease to worship the age incidence of malignant disease as a fetish the better it will be for the patient and the reputation of surgery The sooner we recognize that the extensive wounds of breast amputations should be closed and not necessarily drained, the less frequently we shall hear of "recurrence" in the scar Merely to dissect away the pectoralis fascia when operating for breast cancer is to court disaster When operating on cases of cancer of the breast we must be prepared for an extensive and tedious dissection, otherwise we had better leave the case alone In every case, however small the primary growth may be, we must remove the breast open the axilla and clear away all glands and fat, and remove the pectoralis major, if we have the least doubt about the state of affairs around the coracoid process we should also remove the pectoralis minor Finally hemostasis must be complete and drainage of the wound is to be avoided

Indian Medical Gazette, Calcutta

October XLVII No 10, pp 381 420

64 *Treatment of Snake-Bite by Permanganate of Potassium W B Bannerman
65 Extraction of Cataract in Its Capsule by Division of Suspensory Ligament. V B Nesfield
66 *Special Type of Recurrent Fever Due to a Spirocheta C A Browse
67 Gleanings from Calcutta Post Mortem Records. L. Rogers

64 **Treatment of Snake Bite.**—The conclusions reached by Bannerman as to the action of potassium permanganate powder on small doses of cobra venom injected just under the skin appear to be that this treatment is of some little use under these highly artificial conditions It must be remembered, however, he says, that a snake does not deposit its venom under the skin, but striking as it does with its fangs at right angles to the skin the poison must usually be placed well below the fascia of the part, and therefore further removed from the application of a chemical antidote With regard to Daboia venom injected just under the skin, the results are very similar to those obtained with the venom of the cobra, *i e*, that under artificial conditions the treatment by free incision and rubbing with powder of potassium permanganate is of some little use As a practical measure for employment after actual snake bite it appears to be of no use whatever

66 **Recurrent Fever**—Browse calls attention to a disease observed in Quetta which appears to differ in many respects from the classical forms of recurrent fever at present described and which at the same time has certain characteristics common to each The disease is caused by a spirochete It differs from classical recurrent fever in the type of pyrexia, and the blood changes, namely, the slightly marked polymorphonuclear increase and distinct large mononuclear increase, it resembles classical recurrent fever in some of its clinical features It differs from African tick fever chiefly in the very great contrast in climatic conditions under which it develops In other respects, such as the type of pyrexia and blood changes, there is a decided resemblance The clinical features of the disease are not very distinctive, and to a modified extent resemble those which occur in relapsing fever It is a mild disease, and in no case were there, at any time, symptoms of a serious or alarming nature In most the only symptoms were those common to any febrile condition In the eighteen cases seen by Browse the onset was sudden, with a feeling of cold but no actual rigor Vomiting was the exception and in no case was jaundice or rash noticed All the patients invariably felt perfectly well directly the fever ceased and much resented being detained in hospital A few after late relapses, became anemic and debilitated otherwise the disease was trivial in its effects Pains in the limbs and joints were not uncommon but were only marked in three cases out of eighteen Eight patients had enlargement of the spleen on admission, but of these, five were men with chronic splenitis not due to the spirochetes Pain and tenderness over the spleen and liver during the fever paroxysms was observed in three cases, but was the exception The temperature follows a course similar to that of African tick fever, as it attacks the foreigner to the country In no case did the temperature remain constantly elevated for as long as four days as it does in relapsing fever

Annales de Gynécologie et d'Obstétrique, Paris

October XXXIX No 10, pp 577 640

68 *Prophylaxis of Operative Infect um I Lecène Commenced in No 9
69 *The Urea Index in Pregnancy la femme enceinte) Le

68 **Prophylaxis of Wound Infection in Gynecology**—Lecène looks to improved technical skill in operating for prevention of operative infection, the use of gloves, asepsis and limitation of the field of operation, exact peritonization of all raw surfaces, with or without the roofing over of the small pelvis, and a more skilful selection of the methods to be applied in the individual cases Progress will be along the lines of stricter asepsis and closer adherence to physiologic processes

69 **Urea Index in Pregnancy**—Ambard's formula for estimating the "uremic constant" in individual cases was described in THE JOURNAL, September 7, p 818, and July 20, p 229 Le Lorier has determined this index in twenty four pregnant women, in ten the index was within normal range, in four much below and in four much above In one in the latter group the index was 0 850 (the normal average is 0 065), and it thus indicated defective elimination on the part of the kidneys The patient was a primipara of 24 at the eighth month who had three eclamptic convulsions three weeks before but none since The Esbach test showed still considerable albuminuria The second patient in this group had an urea index of 0 106 and there was considerable albuminuria due in part to infection of the bladder The third patient had an index of 0 104 and although the urine seemed normal yet the woman required strict dietetic measures to bring her safely to term The fourth patient had an index of 0 896, she was in coma at the time and died the next day The details of the twenty four cases are tabulated for comparison They demonstrate anew that the proportion of urea in the blood serum is not a reliable criterion alone for determination of the degree of permeability of the kidneys

Bulletin de l'Académie de Médecine, Paris

October 15 LXXVI No 34 pp 247 276

70 *Influence of Chemical Composition of Air on Vitality of Microbes A Trillat and Guéniot
71 *Direct Sunlight in Treatment of Surgical Tuberculosis, etc (Héliothérapie) A Poncet and R Leriche

70 **Influence of Contamination of Air on Microbes**—The extensive researches reported demonstrate that vitiation of the air by the emanations of putrefaction favor the vitality of microbes, and that certain gases in water have the same favorable action, such gases as are alkaline in nature and contain ammonia, fatty amins and volatile nitrogenized substances allied to the alkaloids It was found that distilled water containing one five millionth of its weight of a putrid gas and an infinitesimal amount of mineral matters serves as a fine culture medium when inoculated with germs, they grow luxuriantly in it The experiments related confirm anew the deleterious influence of fogs, extreme humidity, low atmospheric pressure, vicinity of a focus of putrefaction or contamination with the gases of respiration They throw light further on the changes in food noticed during storms and other unusual atmospheric conditions and the aggravation of unprotected wounds

71 **Direct Sunlight in Treatment of Local Processes**—Poncet has been utilizing for twenty years and in over three hundred cases the benefits from direct exposure of local tuberculous and other processes to the sunlight He commenced this long before "heliotherapy" was heard of His experience has shown that the method is applicable in nearly every climate and that scrofula, rachitis and all forms of inflammatory tuberculosis seem to do better at the seashore, while deep bone processes and any tendency to pulmonary tuberculosis indicate the mountains rather than the seashore The exposures should not be over ten minutes at first, gradually increasing until the part is exposed to the direct sunlight for three hours morning and afternoon One of his most successful cases was in a patient who got his exposures on the fifth floor of a tenement house in the center of Lyons The heliotherapy does wonders, he says, in tuberculous peritonitis and as an adjuvant to operative measures in nearly all forms of tuberculosis, in tardy consolidation of fractures, and for all torpid, chronic infectious processes and trophic disturbances Even when a plaster cast is necessary, he always applies it in such a way as to permit exposure to the direct sunlight The benefit is most marked, as a rule, with patients who "burn" most readily

Archives des Maladies du Cœur, Etc, Paris

October, V No 10, pp 625 688

72 *Pathogenesis and Pathologic Anatomy of Chronic Aortitis and Atheroma in Children A L Franckel
73 *Angina Pectoris and Tobacco G Mouriquand and L Bouchut
74 Case of Sporadic Hemophilia with Fatal Anemia E de Massary and P V Rodot

72 **Aortic Disease in Children.**—Franckel summarizes thirty four cases, including seven from his own experience and one reported by Wilson and Marcy in THE JOURNAL, 1907

73 **Angina Pectoris and Tobacco**—In the case reported a man of 34, a great smoker, developed attacks of angina pectoris and died in one. There was no trace of venereal disease or alcoholism, but signs of tobacco poisoning had been pronounced during life and the man had spontaneously reduced his daily ration of cigars and cigarets as he had noticed that too much smoking aggravated the dyspnea He died five months after the first signs of heart trouble The case would have been cited as one of fatal tobacco poisoning but necropsy revealed syphilitic lesions in the aorta partly closing up the openings into the coronary arteries There is no evidence to date that tobacco alone can induce fatal angina pectoris, but of course it can aggravate an existing tendency

Archives Mensuelles d'Obstétrique et de Gynécologie, Paris

October I, No 10, pp 145 272

75 *Surgical Treatment of Cancer of the Uterine Cervix J L Faure
76 *Surgical Treatment of Uterine Hemorrhage P Bar
77 Evolution of the Mammary Gland (La glande mammaire Les phases qu elle présente au cours de son évolution et de leur déterminisme d après les recherches de MM Bouin et Ancel.) J L Chirié.
78 *Tuberculosis of Uterine Cervix B Desplas

75 **Cancer of the Uterine Cervix.**—Faure states that his oldest cured patient was operated on over fourteen years ago, and he has remained faithful ever since to the method of removing the entire uterus and part of the vagina in a single mass He has now an experience of 250 such operations, and advocates ligating the hypogastric arteries, mentioning several other useful points in technic Radium applications are valuable after removal of the tumor but he warns expressly against the use of radium preliminary to an operation Any advantage from it is far outbalanced by the sclerosis of adjacent tissues which it induces, hampering the work on the ureters in particular But he commends in high terms the application of radium three weeks after the operation, introducing it into the funnel left by the excision of the cervix

76 **Operative Treatment of Uterine Hemorrhage**—Bar analyzes the 153 cases of excessive hemorrhage during pregnancy or childbirth at the maternity in his charge since 1897, in a total material of 20,000 obstetric cases With hemorrhage from an abnormally implanted placenta, only 2 6 per cent of the women succumbed to the hemorrhage while 6.5 per cent died of infection for which obstetric procedures were probably responsible No less than 31 37 per cent of the 153 women presented symptoms of infection Three of the women died from secondary hemorrhage caused during the extraction of the fetus The danger therefore with an abnormally inserted placenta is mainly from infection and from new hemorrhage caused by maneuvers to hasten delivery Laceration of the cervix from rapid dilatation seems to be particularly dangerous in this respect the possibly minute hemorrhage from the laceration proving the last straw

78 **Tuberculosis of Uterine Cervix.**—Desplas reviews the extensive monographs that have appeared on this subject of recent years and emphasizes the importance of traumatism, anomalies in menstruation and defective development of the genital system as contributing factors The main point in the diagnosis is to think of the possibility of tuberculous lesions at this point, and then to differentiate them by exclusion If primary lesions here prove rebellious to local treatment iodin, silver nitrate, the actual cautery, interstitial injection of zinc chlorid or Bier's method of vacuum hyperemia, the cervix should be amputated or the entire uterus removed.

Abdominal hysterectomy is advocated by many in case there is suspicion that the adnexa are involved

Presse Médicale, Paris

October 23 XX No 86 pp 865 872

70 Perforated Gastric or Duodenal Ulcer Five Cases Recovery After Early Operation F Lecène

October 26, No 87 pp 873 884

80 True and False Cancer (De l'inflammation subaigue et des pseudo-sarcomes inflammatoires) G Durante
81 *Dilatation of the Pylorus by Inflatable Ball in Treatment of Tardy Pain in the Stomach from Minute Ulceration in the Pylorus L Meunier

October 29 Supplementary No, pp 885 900

82 *Fibromas in Nasopharynx. J and L Ducuing

81 **Treatment of Tardy Pains in the Stomach**—Meunier has been impressed with the resemblance between the symptoms presented by a minute ulceration near the pylorus duodenum junction and fissure of the anus The tardy pains are the result of morbid contracture of the sphincter, and this may also be the primal factor in the development of the ulceration The logical conclusion is that the lesion and pain may be amenable to the same treatment which has proved its efficacy with fissure of the anus, namely, forcible dilatation of the sphincter He gives an illustration of the small inflatable ball he uses for the purpose, connected by a long tube with a rubber bulb The little ball is swallowed by the patient as he drinks a glass of some alkaline beverage The ball is left undisturbed for some hours, possibly over night, to make sure that it has passed into the duodenum It is then inflated and is gently pulled upward The resistance offered by the pylorus is felt distinctly when the ball reaches a point about 55 cm from the teeth The procedure is repeated every two or three days, inflating the ball more and more each time but never enough to cause pain After five or six applications of the measure the tardy pains became attenuated, as a rule, if they persisted after this he advised operative measures, but he thinks that this mechanical dilatation should be given a trial before advocating an operation

82. **Fibromas in the Nasopharynx**—This article is accompanied by twelve illustrations showing the advantages of the different technics to meet various indications

Revue Pratique d'Obstétrique et de Gynécologie, Paris

October XX No 10 pp 289 316

83 *Scraping Out Contents of Uterine Cervix in Subtotal Hysterectomy (De l'évidement systématique du moignon cervical dans l'hysterectomie subtotale) De Rouville
84 Advantages of Formaldehyd in Sterilization of Gloves and Instruments G Gross and M Barthélemy

83 **Scraping Out the Stump of the Uterine Cervix with Subtotal Hysterectomy**—De Rouville has applied the method he describes in about a dozen cases, and declares that it combines the advantages of both the total and subtotal operation without the drawbacks of either After the uterus and adnexa have been excised, he seizes the upper edge of the stump of the cervix with two forceps and has an assistant pull down on the forceps as if he were trying to turn the cervix inside out With a bistoury De Rouville scrapes out the center of the stump with circular sweeps until he has emptied it completely, leaving only a thin shell a few millimeters thick The lips of the shell are then sutured together which arrests all hemorrhage The vagina is left intact, while all the tissue in the stump which might cause trouble later has been cut out

Semaine Médicale, Paris

October 30 XXXII No 44 pp 517 528

85 *The Atropin Test in Diagnosis of Brain and Meningeal Disease (L'épreuve de l'atropine dans le diagnostic des états méningés et cérébraux) M Roch and F Cottin

85 **The Atropin Reaction**—Roch and Cottin declare that while the atropin reaction in cases of bradycardia cannot be relied on absolutely, yet it furnishes valuable presumptive evidence, and as it is so harmless and within the reach of every practitioner it deserves wider application It is invariably positive in the cases of bradycardia of nervous cerebral origin and negative with bradycardia from heart block Bradycardia due to auto-intoxication is never so pronounced as when a definite brain lesion is involved The test is merely the subcutaneous injection of 0 002 gm of atropin sulphate and control of the heart beat afterward The heart beat is not modified by the drug in case of actual heart disease while the pulse is accelerated when the myocardium is sound The atropin has a paralyzing action on the vagus terminals in the heart The reaction becomes evident in fifteen minutes and reaches its maximum in about an hour The only by effect is possibly a little dryness of the throat Experiences with the test in Bard's service have shown that an abnormally slow pulse can be whipped up by the atropin when it is of extracardiac origin and thus may turn the scale in favor of the diagnosis of meningitis or brain tumor in dubious cases Intracranial pressure on the nerve centers in these cases is causing the bradycardia and the atropin counteracts this. In a recent case the symptoms suggested meningitis eight months after infection with syphilis The pulse was very slow but after injection of atropin it rose from 40 to 100 and then gradually dropped back to 60 Under antisyphilitic treatment recovery was soon complete The atropin reaction was equally marked in a case of meningitis following trauma of the head, the heart beat rising from 55 to 125 under the atropin A number of typical cases are related in which the diagnosis was suggested by the atropin reaction when the symptoms seemed to indicate typhoid One young man had fever, chills, vague headache, enlarged spleen and agglutination reaction with a tendency to stupor, pulse only 52 The cerebrospinal fluid seemed normal but the atropin test was applied after several days of uncertainty and the pulse climbed to 120 in an hour The diagnosis of meningitis was thus possible several days before other symptoms of the general purulent meningitis developed In another case a robust man of 50 developed violent headache accompanied by bradycardia but no fever, Wassermann and eye findings were negative, the spinal fluid was limpid and the atropin reaction pronounced He died from intercurrent pneumonia five days later, and necropsy revealed a chronic pachymeningitis with adhesions and hyperemia In another case the symptoms pointed to heart disease and the bradycardia observed was ascribed to this until the positive atropin reaction compelled reexamination of the patient when other symptoms were discovered previously unheeded, indicating cerebellar disease In another series of cases the negative reaction excluded extracardiac factors and permitted effectual treatment [Talley discussed the prognostic significance of the atropin reaction in heart disease in the *Am Jour Med Sci*, 1912 cxliv, 514, abstracted in these columns recently, p 1485]

Beitrage zur klinischen Chirurgie, Tübingen

September LXXX No 2, pp 191 430

86 *Serodiagnosis of Staphylococcus Infection O Homuth
87 *Tumors Developing in Urinary Apparatus of Workers on Synthetic Dyes (Die unter dem Einfluss der synthetischen Farbenindustrie beobachtete Geschwulstenwicklung) S G Leuenberger
88 Mammary Cancer (Zur Statistik des Brustkrebses) F Schwarzkopf
89 Dislocation of Tarsometatarsal Joint (Fall von Luxation im Lisfranc schen Gelenk) H Meyer
90 Roentgenoscopy of Genu Valgum in Adolescents K Braeunig
91 *Bullets Swept Along by the Blood Stream (Zur embolischen Verschleppung von Projektilen) R Rubesch
92 *Technic for Exclusion of Pylorus (Zur Frage der Pylorusausschaltung) H v Tappeiner

86 **Serodiagnosis of Staphylococcus Infection**—With the technic described, Homuth obtained a positive response in all but two of forty cases of various staphylococcus affections mastitis, furunculosis, follicular tonsillitis, etc, while the response was constantly negative in all but four of seventy four persons healthy or with other diseases not of staphylococcus origin

Cancer in Urinary Apparatus of Workers on Synthetic Dyes—Leuenberger devotes 108 pages to his own experience with eighteen cases and reviews what has been published on the subject by others his bibliography embracing 318 articles He was able to find only forty one previous authentic cases of tumor in the bladder or kidney from this cause The data presented show that these tumors occur not only in those manufacturing but in those handling the dyes The tumors include

125 *By Effects of Neosalvarsan (Nebenwirkungen des Neosalvarsans.) J Simon (Todesfall nach Neosalvarsaninfusion) O Busse and L. Merian
126 Salvarsan in Chorea Minor L. Szametz.
127 Roentgenoscopy of Intestinal Peristalsis Under Influence of Dietetic Measures J Kretschmer
128 Warning Against Catgut for Sutures Which Must Stand Much Strain W Kausch
129 Treatment of Whooping Cough (Behandlung des Keuchhustens) Althoff
130 *Mechanical Means to Arrest Epistaxis Ritschl
131 Absorption of Digitoxin from Preparations of Digitalis and Its Relation to the Action and By Effects of the Drug R Gottlieb and S Ogawa Commenced in No 42
132 Salvarsan in Syphilitic and Parasyphilitic Nervous Disease J Donath Commenced in No 42
133 Reporting of Industrial Disease (Anmeldung von Gewerbekrankheiten) F Koelsch

123 **Extraperitoneal Cesarean Section**—Küstner has had this operation done in seventy two cases in his maternity, and regards it as a very valuable method for delivering the child when the smallness of the pelvis or other reason renders it improbable that the child can be spontaneously expelled without injury to it None of the mothers succumbed except one from a chloroform accident, and only four of the children died, one from an eclamptic mother and three which were so deeply asphyxiated that it proved impossible to reanimate them It is immaterial with this technic whether there is infection or not, so it can be applied in cases in which without it there can be question only of craniotomy

124 **Occult Cholecystitis**—Bahrdt refers to cases of cholecystitis in which the fever comes on with symptoms only on the part of the lungs and bronchi The first sign of trouble is fever which may run high for a day or so, and râles are found in the lower part of one lung, with slight dulness and signs of mild bronchitis Then the fever subsides and with it the symptoms in the respiratory apparatus They return at a new attack, but there are no sounds of friction in the pleura The patients seem very ill during the attacks but nothing can be found to explain them at first except the slight and inadequate local bronchitis and infiltration of the lung Then suddenly slight jaundice is noticed, generally during or after an attack of fever, and it soon subsides The next attack may be ushered in with a chill, the bronchial findings return and with them the slight jaundice, and this time there may be local pain and tenderness in the gall bladder region One patient passed a hard gall stone after sixteen such attacks and there has been no recurrence of any of the symptoms on the part of either the respiratory or biliary apparatus during the seven years since Pneumonia is sometimes accompanied by cholangitis, but here the condition is reversed, the lungs and bronchi are secondarily affected The germs must be comparatively avirulent in such cases as they are conquered each time by the local defensive forces. This assumption is sustained by the absence of suppuration, no abscess was found even in a case in which attacks of fever up to 104 F had returned at intervals for years In one of his four cases the right lung was exclusively affected during the sixteen attacks, but in the others both sides were involved, always the lower lobe One patient was a man of 87 who for ten months had one or two of these attacks of fever for one or more days each month, with signs of bronchitis and later slight jaundice and finally pains in the liver region but no gall stones were passed The man died then of intercurrent pneumonia This was responsible also for the death of another patient, a robust woman of 79 with arteriosclerosis In 1903 she had a day of high fever and bronchitis, returning at brief intervals during two months and then with longer intervals, accompanied later by jaundice and exacerbation of the bronchitis which became chronic Necropsy revealed a large gall stone in the dilated common bile duct, but no abscess In the fourth case the man had chronic eczema and the jaundice and tenderness in the liver region developed at his second attack within one month After four or five attacks there were no more for six years, when the febrile bronchitis returned, jaundice and gall stone colic coming on the fourth day cleared up the diagnosis Treatment should aim to promote the flow of bile and cholesterin metabolism and to sterilize the intestines, possibly with naphthalin, if the patient can bear it

125 **By Effects with Neosalvarsan.**—Simon reports two cases in which the neosalvarsan caused severe angioneurotic symptoms, collapse, congestion or acute swelling of the brain, with an exanthem The latter patient had complained of headache and the pupils did not react alike, before the drug had been given Two days after the second injection of neosalvarsan he became unconscious for five hours and had violent headache on rousing Busse reports the death of a girl of 18 after two injections of neosalvarsan, and necropsy revealed the changes characteristic of salvarsan and neosalvarsan intoxication He declares that these fatalities are not due to any fault in technic but to the treacherous action of arsenic, which can never be foreseen in the individual case This danger inheres in the new preparations of arsenic just as in the old classic preparations, and the physician must reckon with the possibility of encountering it when he uses large doses of any one of them The only symptom presented by Busse's patient was the recurrence of nodules on the external genitals during the last eight months, the two injections of 0 6 neosalvarsan were given intravenously with an interval of eight days Serious symptoms developed the day after the second injection, with death two days later

130 **Treatment of Epistaxis**—Ritschl calls attention to the prompt arrest of epistaxis by Nägeli's method of pulling on the nerves and vessels in the neck—the so called *Kopfstützgriff* and *Kopfstreckgriff* The stretching of the cervical sympathetic stimulates the vasoconstrictors, and thus acts on the epistaxis Standing behind the seated patient, place your hands under the angle of the jaw and the sides of the back of the head and try to lift the head up The head can be drawn a little backward at the same time which permits the blood to escape into the nasopharynx Ritschl has found this simple measure invariably successful in arresting epistaxis in one or two minutes at most Nägeli has called attention to a number of these mechanical measures as a means to combat neuralgia and neuroses

Wiener klinische Wochenschrift, Vienna

October 24, XXV No 43 pp 1693 1728

134 *Facts and Theories in Medical Science (Tatsachen und Theorien in ihrer Bedeutung für Naturwissenschaft und Medizin) M Kassowitz.
135 *Local Predisposition to Cancer (Zur Chemie der Prädilektionsstellen für Karzinom) E Freund and G Kaminer
136 Meiostagmin Reaction and Pregnancy A Juichiero
137 Idiosyncrasy as Manifestation of Anaphylaxis (Experimentelle Beitrag zur Frage der Idiosynkrasie gegen Brom und Chininsalze als Ueberempfindlichkeiterscheinungen) E Manoiloff
138 Serodiagnosis of Malignant Anthrax (Die Diagnose der Milzbrandsepsis aus dem Lumbalpunktat) L. Pollak
139 Hernia of the Diaphragm (Ein radiologisch diagnostizierter Fall von traumatischer Zwerchfellhernie.) M Haudek

October 31 No 44 pp 1729 1772

140 Percussion of the Heart. M Heitler
141 Relations Between Structure and Functioning of the Cerebellum (Beziehungen zwischen Bau und Funktion des Kleinhirns am Menschen) R Barany
142 *Vaccine Therapy of Multiple Staphylococcus Abscesses in Infants. (Immunotherapie der multiplen Staphylokokkenhautabszesse der Säuglinge) P v Szily
143 Action of Bile Salts on Gonococci (Einwirkung von gallensauren Salzen auf Gonokokken) K. v Hofmann
144 *Hydronephrosis in Children H Anscherlik
145 Technic for Therapeutic Application of Radium Emanations (Neue Methode zur Einverleibung grösserer Emanationsmengen) E Kühnelt.

134 **Facts Versus Theories**—Kassowitz' address on facts and theories in their respective importance for natural science and medicine was delivered at the festival in his honor arranged by the *Gesellschaft für innere Medizin und Kinderheilkunde*, as mentioned in the Vienna Letter, Nov 23 He warned against the too ready acceptance of theories before they have been substantiated by facts and cited concrete examples of how such theories have stood in the way of progress Scientists refused to accept the evidence of their own eyes in regard to some new fact discovered because it did not fit into the theory on the subject prevailing at the time As an instance in kind he cites the history of rachitis The bones are soft and flexible because they contain less lime than they need Theoretically, all that is necessary is to feed the child more lime No one heeded the fact that rachitic bone shows signs of inflammatory hyperemia and that all inflamed bones contain an abnormally small proportion of

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CLINICAL FEATURES OF SUDDEN OBSTRUCTION OF THE CORONARY ARTERIES

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CHICAGO

Obstruction of a coronary artery or of any of its large branches has long been regarded as a serious accident Several events contributed toward the prevalence of the view that this condition was almost always suddenly fatal Parry's writings on angina pectoris and its relation to coronary disease, Jenner's observations on the same condition centering about John Hunter's case, Thorvaldsen's tragic death in the theater in Copenhagen with the finding of a plugged coronary, sharply attracted attention to the relation between the coronary and sudden death In Germany Cohnheim supported the views of Hyrtl and Henle as to lack of considerable anastomosis, and as late as 1881 lent the influence of his name to the doctrine that the coronary arteries were end-arteries His Leipsic necropsy experience, as well as experiments on dogs, forced him to conclude that the sudden occlusion of one of these vessels or of one of the larger branches, such as the ramus descendens of the left coronary, meant death within a few minutes Others emphasized the same view

No one at all familiar with the clinical, pathologic or experimental features of cardiac disease can question the importance of the coronaries The influence of sclerosis of these vessels in the way of producing anemic necrosis and fibrosis of the myocardium, with such possible results as aneurysm, rupture or dilatation of the heart, is well known So also is the relation of the coronaries to many cases of angina pectoris, and to cardiac disturbances rather indefinitely classed as chronic myocarditis, cardiac irregularities, etc It must be admitted, also that the reputation of the descending branch of the left coronary as the artery of sudden death is not undeserved

But there are reasons for believing that even large branches of the coronary arteries may be occluded — at times acutely occluded—without resulting death, at least without death in the immediate future Even the main trunk may at times be obstructed and the patient live It is the object of this paper to present a few facts *along this line, and particularly to describe some of the* clinical *manifestations of sudden yet not immediately* fatal cases of coronary *obstruction*

fact that presenting the clinical features of coronary
the patchy fit may be well to consider certain facts
at autopsy make that sudden obstruction is not neces-
sclerotic vessels uch proof is afforded by a study of the
ormal as well as of the diseased heart,
t and by bedside experience

The coronaries are not so strictly end-arteries, i e, with merely capillary anastomoses, as Cohnheim and others thought By careful dissections, by injection of one artery from another, by skiagraphs of injected arteries and by direct inspection of hearts made translucent by special methods, there is proof of an anatomic anastomosis that is by no means negligible

Jamin and Merkel's† beautiful stereoscopic skiagrams show the remarkably rich blood-supply of the heart, with occasional anastomoses between vessels of considerable size The possibility of injection of one coronary artery from the other is admitted even by those who deny that such injection proves more than a capillary non-functioning anastomosis Amenomiya,[1] by injecting hearts of young persons, showed naked-eye anastomoses in the subepicardial tissue He feels that Hirsch and Spalteholz[2] have nearly cleared up the question as to the relation between the heart muscle and disease of the coronary artery from the anatomic standpoint Hirsch says that in dogs the anastomosing vessels are functionally competent, and Spalteholz says that in man the vessels are nearly the same as in dogs, rich in anastomoses even in those of considerable caliber The latter investigator, by a method of injection and treatment of the heart so as to make the muscle transparent, shows to the naked eye that there are anastomoses of considerable size

Among others who are on record as believing that there are non-negligible anastomoses may be mentioned Haller, Huchard, Orth, Michaelis, Langer, Legg, West All recognize, however, that there are individual differences, and also that though the heart may show rich anastomoses, these are not necessarily functional, i e, that an artery which anatomically is not a terminal artery may yet be such functionally

But there is proof not only of anatomic connection between the two coronaries, but that in certain instances, at least, such connection is of functional value Experiments on lower animals and the clinical experiment of disease of the coronaries with autopsy findings show this

Much of the earlier experimental work on the lower animals, obstructing the coronary arteries by ligatures, clamps or artificial emboli, *gave promptly fatal result* Among those who worked along this line and reached these conclusions may be mentioned Erichsen (1842), Panum (1862), *von Bezold, Samuelson (1880),* Cohn-

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11 Kuhl Der
System xv, 360

† Jamin and Merkel Die Koronararterien des menschlichen Herzens in stereoskopischen Röntgenbildern Jena 1907 Extensive bibliographies are contained in the articles by Thorel (Lubarsch Ostertag s Ergebnisse ix Abt 1) and in Amenomiya (Virchows Arch f path Anat 1910 cxcix 187) I repeat only some of the more important references and add new ones

[1] Amenomiya Ueber di ... zwischen Koronararterien und Papillarmuskeln im ... Anat 1910, cxcix 187

[2] Hirsch and S
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heim and Schulthess-Rechberg (1881), G Sée, Rochefontaine and Roussy (1881) Bettelheim (1892), Kronecker, and, to some extent, Michaelis The work of Cohnheim[3] attracted particular attention and his conclusions as to end-arteries, irreparable injury, and cessation of the beat of both sides of the heart within two minutes from the time of shutting off the coronary circulation confirmed and elaborated the conclusions of the earlier experimenters, and was in turn confirmed by the French writers just named, by Bettelheim and others

But soon dissent was heard from various quarters as to many of Cohnheim's results, and among other things as to the sudden death following the ligations Michaelis found that the injury from ligation in rabbits was not so serious or irreparable as in dogs Fenoglio and Drouguell, in 1888, found that some dogs might live Porter showed that after ligation of one or two large branches of the coronary artery a dog might live hours or days More than half his animals lived after ligation of the descending branch of the left coronary Von Frey, at the Congress for Internal Medicine in 1891, said that he doubted the sudden stopping of the heart as Cohnheim taught he believed that clearly the greater weight should attach to those observations in which the ligation was borne without harm, and that the stopping of the heart was not a necessary consequence of the obstruction of a large coronary branch Hirsch in eight dogs and two apes had no sudden deaths from ligation Bickel,[4] under Orth and Amenomiya, had a dog live nineteen days after the ligation of the descending branch of the left coronary, he killed two dogs, one on the eighth and the other on the seventeenth day after ligation Kolster ligated smaller branches, his dogs lived, and when killed at intervals of several weeks showed the progressive changes of fibrosis of the myocardium Imperfect technic, by which damage was done to the heart muscle and pneumothorax produced, is offered as a partial explanation, at least, for the more rapidly fatal results obtained by Cohnheim and others Miller and Matthews[5] call attention to the better results where ether as an anesthetic is employed rather than curare or other drug With ether they were able to ligate large branches, many of their dogs living several weeks

Experimentally, then, sudden death, even late death, is not a necessary consequence of obstruction of even large branches, such as the descending branch of a coronary artery

There are numerous autopsy observations, frequently with helpful clinical history, that show directly or by inference the existence of efficient anastomoses, and the ability of the heart at times to survive the obstruction of a coronary or some large branch Some of these instructive cases may be mentioned Pagenstecher, on account of an accident, ligated the descending branch of the left coronary artery and the patient lived five days Thorel has seen hearts with complete obstruction of the artery, with fibrous or calcified myocardium, and yet no symptoms during life the patient dying of some other disease I have seen the descending branch completely occluded with an extensive fibrous area in the interventricular septum and at the apex, the latter aneurysmally dilated, where the process was clearly one of long standing West[6] cites several cases in which at autopsy complete obstruction of one coronary was found, yet the patients had long survived this serious lesion Chiari, in a 32-year-old nephritic, found a sclerosed right coronary plugged by a thrombus, with resulting scattered patches of myomalacia cordis in the areas supplied by this artery A portion of this thrombus had become detached and had embolically plugged the left coronary, resulting in sudden death From the symptoms and the autopsy findings the thrombus in the right artery had formed at least two days before The fact that the softened patches in the myocardium were scattered, with normal tissue between, and that the heart functionated fairly well until the left artery also was obstructed, leads Chiari to infer that anastomoses must exist between the right and left coronaries Merkel[7] drew the same inference as to anastomoses from the patchy character of the lesions in the heart of a woman of 76 years, there being normal muscle between the softened areas The left coronary was the seat of the obstruction He also saw in a man of 37 the left coronary closed, with nourishment through the right artery Dock[8] in a case of gradual occlusion of the right coronary artery was able to demonstrate a direct opening of the finer branches of the left coronary into the end of the right

Spalteholz says that we all know cases of stoppage of large vessels without large infarcts resulting Recklinghausen and Fujinami found this condition in man, as Hirsch had in dogs and monkeys, i e, smaller infarcts than the distribution of the vessel would lead one to expect Galli saw complete closure of the entrance to the right coronary artery yet no change in the myocardium By injection he found a round-about anastomosis between the right and left coronary arteries Samuelson cites the case of a patient living five hours after obstruction, Huber one of a patient living several days Aschoff and Tawara[9] saw a patient live fourteen days, "with nearly complete infarction of the parietal wall of the left ventricle" In several cases of angina pectoris cited by Huchard[10] the patients lived many hours after the onset of the final attack, which autopsy showed was due to a thrombotic closure of an artery Osler refers to the fact that the patient may live for some time after obstruction Krehl expressly states that in man the more or less sudden occlusion of an entire coronary artery, or at least a large branch, such as the descending branch, is compatible with a continuance of life

One may conclude, therefore, from a consideration of the clinical histories of numerous cases in which there has been careful autopsy control, from animal experiments and from anatomic study, that there is no inherent reason why the stoppage of a large branch of a coronary artery, or even of a main trunk, must of necessity cause sudden death Rather may it be concluded that while sudden death often does occur, yet at times it is postponed for several hours or even days, and in some instances a complete, i e, functionally complete recovery ensues

The clinical manifestations of coronary obstruction will evidently vary greatly, depending on the size, location and number of vessels occluded The symptoms and

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[3] Cohnheim and Schulthess Rechberg Ueber die Folgen der Kranzarterienverschliessung für das Herz Virchows Arch f path Anat., 1881 lxxxv 503

[4] Cited by Amenomiya (See Note 2)

[5] Miller and Matthews Effect on the Heart of Experimental Obstruction of the Left Coronary Artery Arch. Int. Med June 1909 p 476

[6] West Tr Path Soc London 1882 xxxiv 67

[7] Merkel H Ueber den Verschluss der K Herzens, Festschrift für Rosenthal Leipsic 1906

[8] Dock George Notes on the Coronary A 1896

[9] Aschoff and Tawara Die heutige Lehre v anatomischen Grundlagen der Herzschwäche

[10] Huchard Traité clinique des mal Edition p 560

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end-results must also be influenced by blood-pressure, by the condition of the myocardium not immediately affected by the obstruction, and by the ability of the remaining vessels properly to carry on their work, as determined by their health or disease. No simple picture of the condition can, therefore, be drawn. All attempts at dividing these clinical manifestations into groups must be artificial and more or less imperfect. Yet such an attempt is not without value, as it enables one the better to understand the gravity of an obstructive accident, to differentiate it from other conditions presenting somewhat similar symptoms, and to employ a more rational therapy that may, to a slight extent at least, be more efficient.

The variations in the results are to be accounted for in part by variations in the freedom with which anastomosing branches occur. Presumably, too, symptoms will vary with the vessel or branches occluded. It is conceivable that with occlusion of the right coronary the symptoms might be different from those following obstruction of the left artery, systemic edema might be a consequence of the former condition and pulmonary edema of the latter. These points are, however, by no means settled either by experimental or clinical observation. The condition of the remaining vessels as to patency and presence of sclerosis must play an important part in deciding how much they are capable of doing in the way of compensatory nutrition to the anemic myocardium, the strength of the heart itself, as determined, perhaps, by old valvular or myocardial disease, would also have its influence. And presumably a sudden overwhelming obstruction, with comparatively normal vessels, would be followed by a profounder shock than the gradual narrowing [illegible] lumen through sclerosis which has accustomed the [illegible] to this pathologic condition and has perhaps ca[illegible] collateral circulation through neighboring or anast[illegible] vessels to be compensatorily increased. The [illegible] of the vessels of Thebesius is also not to be [illegible] in this connection, compensatory circulation [illegible] these accessory channels may be of considerable [illegible] in nourishing areas of heart muscle poorly [illegible] by sclerotic or obstructed arteries.

Attempts to group the [illegible] of coronary obstruction according to clinical [illegible] must be more or less unsatisfactory, yet, imper[illegible] the groups are, the cases may be roughly classified [illegible]

One group will include [illegible] in which death is sudden, seemingly [illegible] and perhaps painless. Krehl[11] has emphasized the [illegible] of the sudden death of this type, the [illegible] terminal respiratory agony, of distortion of the [illegible], of muscular contractions.

A second group includes [illegible] cases in which the attack is anginal, the pain [illegible] the shock profound and death follows in a few [illegible] several minutes at the most.

In a third group may be [illegible]-fatal cases with mild symptoms. Slight angina [illegible] without the ordinary causes (such as walking, [illegible] some of the stitch pains in the precordia, may [illegible] due to obstruction of small coronary twigs. Such [illegible] of these phenomena is, however only a [illegible] based on the fact that other causes for the pains [illegible] and that the patchy fibrosis of the myocard[illegible] later found at autopsy may have originated [illegible] of the sclerotic vessels, and such [illegible] small vessels may well have produced symptoms differing chiefly in degree from those caused by obstruction of larger arteries of the heart.

In a fourth group are the cases in which the symptoms are severe, are distinctive enough to enable them to be recognized as cardiac, and in which the accident is usually fatal, but not immediately, and perhaps not necessarily so. It is to the clinical features of this group that attention is directed in what follows.

By way of introduction, I give in outline the history of a case, experience with which acutely attracted my attention to this subject.

Case 1.—*History*.—A man, aged 55, supposedly in good health, was seized an hour after a moderately full meal with severe pain in the lower precordial region. He was nauseated and believing that something he had just eaten had disagreed with him he induced vomiting by tickling his throat. The pain continued, however, and his physician was called, who found him cold, nauseated, with small rapid pulse, and suffering extreme pain. The stomach was washed out and morphin given hypodermically. The pain did not cease until three hours had passed. From this time the patient remained in bed, free from pain, but the pulse continued rapid and small, and numerous râles appeared in the chest. When I saw him twelve hours from the painful attack his mind was clear and calm, a moderate cyanosis and a mild dyspnea, were present. The chest was full of fine and coarse moist râles; there was a running, feeble pulse of 140. The heart tones were very faint and there was a most startling and confusing hyperresonance over the chest, the area of heart dulness being entirely obscured. The abdomen was tympanitic. The urine was scanty, of high specific gravity, and contained a small amount of albumin and a few casts. The temperature was subnormal, later going to 99 F. Occasionally there was nausea and twice a sudden projectile vomiting of considerable fluid material. This condition remained with slight variations up to the time of death, fifty-two hours after the onset of the pain, though at one time the râles seemed nearly to have disappeared. A few hours before death the patient described a slight pain in the heart region, but said it did not amount to much. A remarkable circumstance, and one that occasioned surprise in those who saw the patient and who realized from the almost imperceptible pulse and the feeble heart tones how weak the heart must be, was the fact that he frequently indulged in active muscular effort without evident harm. He rolled vigorously from side to side in the bed, sat suddenly bolt upright, or reached out to take things from the table near by, and once, feeling a sudden nausea, he jumped out of bed, dodged the nurse and ran into the bathroom, where he vomited, and yet he seemed none the worse for these exertions.

Necropsy (Dr. Hektoen).—The heart was of normal size, but both coronary arteries were markedly sclerotic, with calcareous districts and narrowing of the lumen. A short distance from its origin the left coronary artery was completely obliterated by a red thrombus that had formed at a point of great narrowing. The wall of the left ventricle showed well marked areas of yellowish and reddish softening, especially extensive in the interventricular septum. At the very apex the muscle was decidedly softer than elsewhere. The beginning of the aorta showed a few yellowish spots, these areas becoming less marked as the descending part was reached. An acute fibrinous pericardial deposit, which showed no bacteria in smears, was found over the left ventricle. (The pericarditis probably explains the slighter pain complained of a few hours before death.) There was marked edema of the lungs. In other respects the anatomic findings were those of health.

A colleague personally related to me the case of a man of 60 who, three days after a severe anginal seizure fe[illegible] well enough to walk on the street though [illegible] dyspnea. He died suddenly on the fif[illegible] obstruction in the left coronary, and the ation of the pain to the neck and arm, the diagnosis will not be so difficult as where these suggestive aids are lacking The bilateral character of the emphysema, the persistence of breath sounds, often with râles, the failure of the heart to be dislocated, will help exclude pneumothorax and diaphragmatic hernia The absence of blood from the vomitus, the absence of peritonitic tenderness, a study of the temperature, the leukocytes, etc , will help in excluding subdiaphragmatic accidents

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[11] Krehl Der Verschluss der [illegible], Nothnagel's System, xv, 300.

Obrastzow[17] calls particular attention to this resemblance to surgical accidents which my own experience corroborates Engelhardt's case also illustrates this point

If these cases are recognized, the importance of absolute rest in bed for several days is clear It would also seem to be far wiser to use digitalis, strophanthus or their congeners than to follow the routine practice of giving nitroglycerin or allied drugs The hope for the damaged myocardium lies in the direction of securing a supply of blood through friendly neighboring vessels so as to restore so far as possible its functional integrity Digitalis or strophanthus by increasing the force of the heart's beat, would tend to help in this direction more than the nitrites The prejudice against digitalis in cases in which the myocardium is weak is only partially grounded in fact Clinical experience shows this remedy of great value in angina, and especially in cases of angina with low blood pressure, and these obstructive cases come under this head The timely use of this remedy may occasionally in such cases save life Quick results should also be sought by using it hypodermically or intravenously Other quickly acting heart remedies would also be of service

122 South Michigan Avenue

LAWS RELATIVE TO THE SANITARY CONTROL OF PUBLIC EATING- AND DRINKING-PLACES *

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CARNEGIE, PA

The sanitary knowledge of the ancient Egyptians was tolerably extensive, and, gauged by the measure of those early ages, by no means unimportant It corresponds to the reality in both the actual and chronologic points of view to consider the Jews (Moses) as creators of public hygiene

The Egyptian priests bathed their bodies twice every day and twice every night This was not altogether a priestly custom for history relates that Pharaoh's daughter bathed daily in the Nile

The ordinance of Leviticus xv, 11, was made the basis of a sanitary system of ablutions before meals, for which vessels were provided, and further, to secure against defilement in any other way, a system of washing of cups, pots and brazen vessels was devised (Hebrews ix, 9 and Mark vii, 4) In Leviticus xiii and xiv it is noted that the patients' clothing, the vessels they used and the houses they lived in were disinfected Later St Mark vii, 4, reads "And when they come from the market, except they wash, they eat not And many other things there be, which they have received to hold, as the washing of cups and pots, brazen vessels and of tables "

The rich of Greece (460 B C) had their private baths and the Athenians their public baths The Athenian maiden, unlike her Spartan sister, did not think it proper to exhibit her bodily skill and beauty publicly in her chiton, but taking a bath seems to have been one of her every-day habits, as shown by numerous bathing scenes on vases

When in the Greek home, as guests, persons reclined comfortably at the table and water was poured over the hands and dried with individual towels Then small portable tables were brought After the repast was over, the tables were removed, the floor swept clean of crumbs, bones and the like, and once more water was poured over the hands The use of knives and forks was unknown at this period, whence the custom of washing the hands and drying them on towels

Roman laws provided no protection for the individual In older times of Roman history, lavatrinæ or wash-houses were next the kitchen Later, hot, sudatory, tepid, cold and shower baths were in the homes At the end, as at the beginning of a meal, the hands were washed with scented soap The public baths, such as the thermæ of Veleia and Pompeii and the baths of Caracalla, in Rome, (217 B C), were masterpieces of architecture It has been calculated that 62,000 people could have bathed any hour in the public baths of Rome, not to mention the private baths

Hygienic measures were a part of the religious observances among the ancient Jews, as well as among the peoples of Assyria and India The measures were enforced by their priests Among the Greeks this duty was transferred to the physicians Through the whole the Jews enjoyed a remarkable immunity from epidemic diseases, while their Christian neighbors perished around them In medieval and modern history, down to the present time, the filthy habits of the Christian population offered a premium for plagues of every kind Two centuries ago the mortality of London was eighty per thousand Until a comparatively recent date the mortality of our large cities compared favorably with the London of two centuries ago

The gradual deviation from the sanitary ideals of mosaic times, to the beginning of the twentieth century, was such as to lead to the belief that the standard of civilization was declining, instead of rising It is not an uncommon thing to see, in the densely populated sections of our large cities, in the small towns and even in country districts, hygienic and sanitary conditions relative to public eating- and drinking-places, that would put primitive peoples to shame On a tour of inspection I saw many eating-places where no provisions were made for ablutions before meals The knives, forks, spoons and dishes (some the cat and dog had used) were rinsed, not washed, in water that had not been changed for days Among the patrons of these eating places were whites, blacks and mongols The diseases represented were tuberculosis, syphilis, gonorrhea trachoma, scabies, tinea sycosis, and no doubt typhoid, scarlet fever, etc In another series were found eating-places where provisions were made for ablutions of face and hands but all used the same bowl, towels, soap, etc The eating- and drinking-vessels were washed in pans, but no attempt was made at sterilization

In first-class eating-places provision is made for the hygienic and sanitary comfort of the patrons, yet it is the personal element that enters into the protection of the individual in the higher class places

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[17] Obrastzow and Straschesko Zur Kenntniss der Thrombose der Koronararterien des Herzens Ztschr f klin Med 1910 lxxi 110

* Read in the Section on Preventive Medicine and Public Health of the American Medical Association at the Sixty Third Annual Session held at Atlantic City, June 1912

The standard of public drinking-places may be classed in much the same way as the eating-places, with this exception even in places of the highest class, glasses and bottles are only occasionally sterilized In lieu of the foregoing conditions I would suggest the following

1 The enactment of laws relative to the sanitary condition of public eating- and drinking-places, which shall provide for (a) the personal hygiene of owners and employees and (b) sanitary precaution on the part of owners and employees

2 The owner of each and every public eating- and drinking-place shall be licensed under such law, such license to continue in force as long as there is no violation thereof

3 Any and every glass, cup, dish and other eating- or drinking-vessel or utensil used in any hotel, saloon, restaurant, drug-store, soda-fountain, or other place of public refreshment in the state shall be sterilized in steam or boiling water after being used by any patron and prior to any further use thereof in eating or drinking by any other patron, and no such glass, cup, dish or other eating- or drinking-vessel or utensil after use by one patron in eating or drinking, shall be offered or be permitted to be used by any other patron without having first been thoroughly cleansed and then sterilized in steam or boiling water

4 No person, firm or corporation shall at any time or place keep, expose, offer or prepare for sale, or shall store pending sale, any article or substance of human food or drink in any place or premises which is not, at such time, screened so as to prevent insects from having access to such article or substance, and no person, firm or corporation shall at any time or place keep, expose, offer or prepare for sale, or shall store pending sale, any article or substance of human food or drink in any place or premises unless such article or substance is pure and wholesome and entirely free from contagious and infectious bacteria

5 No drinking-vessel, used in common or to be used in common, shall be kept, exposed, provided or permitted in any railway station, public or private school, public playground, public park, public building or in any place to which the public are admitted

6 No drinking-vessel used in common shall be exposed, kept, provided or permitted in any mill, factory, railway train, ship, boat, hospital, private or public institution, public works or in any place where a number of persons are employed or assembled

7 No table-linen or coverings, towels, cloths, sponges, soap, combs or water used in common or to be used in common shall be exposed, kept, provided or permitted in any public eating- or drinking-place

8 No person or persons shall be served food or drink at any public eating- or drinking-place until they shall have thoroughly cleansed the hands and face with soap and water, as provided for in Suggestion 7

9 No person or persons known to be suffering from an infectious or contagious disease shall be served food or drink at or in any public eating- or drinking-place unless isolated from other patrons under proper sanitary conditions, in order that no other patron shall in any way be exposed or endangered in any manner whatsoever to said infection or contagion

It may be argued that no sanitary system can supplant present conditions unless entailing great expense and inconvenience To this I agree, but whatever is humane and promotes the progress of civilization is expedient and necessary I would therefore suggest the following as a few of the many things that may be used sanitary paper cups, straws, cupless attachments on faucets, sanitary systems of drinking-fountains in mills, factories, stores, institutions, etc, bubbling fountains, which make cups unnecessary, paper napkins, individual towels, cloths, soap, installation of systems for rapid cleansing and sterilization of dishes, glasses, cups or other utensils, used in or about public eating or drinking places

Most, if not all, of the state boards of health have condemned the public drinking-cup The progressive cities have passed ordinances prohibiting the use of the public cup St Louis has taken advanced measures to enforce the cleansing of any and every glass, cup, dish and other eating- or drinking-vessel or utensil used in or at any public eating- or drinking-place, in running water or clean water This ordinance is a great stride in the right direction, but falls far short of the mark

Railway companies announce that passengers do not demonstrate any great desire for individual sanitary cups Other large corporations maintain that there is no particular benefit derived from the use of the individual cup, and further that the added expense is necessarily great The same argument comes from the individual in respect to slot machines, paper napkins, etc

The solution of this great problem of sanitary control of public eating- and drinking-places depends on the elimination of two factors — avarice and ignorance The mercenary motive of the individual, as regards hygienic and sanitary methods, predominates over his moral obligation to himself and his fellow men Hence the sequence of his reasoning leads to antagonism of laws respecting sanitary science, basing a great deal on the aphorism that "the Lord giveth and the Lord taketh away" The community reasons that the enactment of laws relative to the control of sanitary conditions brings on it added hardships in the form of increased tax-rate, higher cost of living, physical discomfort and infringement on its personal liberty

The state, until a comparatively recent date, did not take marked interest in sanitary affairs It does not at the present time consider seriously the individual The most notable advances made by the state have been when great commercial interests were endangered It is said that "Ignorance of the law excuses no one" Such being the case, we have one of two ways of solving a serious problem The laws must be enacted after the mosaic method and then enforced, which is a most plausible way, or the laws must lie dormant until the masses are educated or have reached a higher standard of civilization

Realizing that any community that wishes to be prosperous must be healthy, sanitarians have taken the initiative in formulating laws to that end, and have accomplished more for their respective communities than has been achieved in this or any other country in the last 2,000 years This may seem a broad assertion, but is it not true? The brilliant and noble work of Gorgas White, Blue, Stiles, Sternberg, Wyman Guiteras, Carroll, Lazear and associates who forged the chain enabling the United States government to have and to hold its many possessions, had the sanction and legal support of the government

Then must we work and wait until we are in the face of a great commercial enterprise, or un[illegible] e are in the throes of epidemics of typhoid [illegible] arlet fever, small-pox, cholera, yellow [illegible] before we awaken to the ne[illegible] of sanitary control? Nc duty It demands of us as medical men and sanitarians to let the light of our knowledge shine and point out the way Let us blot out the black pages of the last 2,000 years and take up the work that the ancient Babylonians, Jews and Egyptians so nobly began It is for sanitarians to apply sanitary science to the affairs of civilization, the masses depend on sanitarians for leaders and teachers

We know what the epidemics of the past have cost us We know how much we have accomplished and how far we have advanced, but we are not left without a guide It is true we do not have a Moses to lead us, but we have more in Hurty, Bracken, Evans, Dixon and their kind, great broad-minded men, unselfish, forceful and considerate of the humane advancement of sanitary propaganda These men have taken the initiative in health work Now let us have the hearty cooperation of every member of the American Medical Association—every person, it matters not his walk in life, interested in the progress of civilization, in securing for every state in the United States laws relative to the sanitary control of public eating- and drinking-places It should therefore be our earnest endeavor and duty to make hygiene and sanitary science one of the basic principles of our civilization

401 Fourth Avenue.

THE CONTROL OF CONTAGIOUS DISEASES IN A MUNICIPALITY *

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Accepting the word "contagious" in its broadest sense, we have a subject before us which would make a better title for a book than for a discussion of this kind, and yet I desire at the start to say that I shall use the word "contagious" as synonymous with "infectious" and "communicable," and speak of contagious diseases as those diseases which are capable of transmitting infection from one person to another in one way or another

If I had been asked ten years ago to give my opinion as to how to control contagious diseases in a municipality, I would have said "by immunization, isolation and disinfection", but after more than ten years in this field of work, it would seem that the answer would be even more simple, namely, "by education." It is true to-day, as it was then, that some acute contagious diseases, principally small-pox and diphtheria, are controllable by immunization, the former by vaccination, the latter by the use of diphtheria antitoxin, but in order to get good results from these methods, it is necessary to have the people of a community so educated that they will submit to them readily and whenever the health officer finds it necessary for them to do so Immunization is undoubtedly valuable in the control of some of the other diseases, among which may be mentioned typhoid fever, but it would be difficult to make any great use of this method in any municipality at the present time because of the lack of knowledge of this procedure on the part of the community Isolation, the second method which has been in vogue for a number of years for the control of contagious diseases is desirable and satisfactory when it can be employed, but it is necessary first to have knowledge of a case before it can be isolated It was because of the fact that so many cases of acute contagious diseases, particularly diphtheria, scarlet fever, measles, German measles and others of that nature were never reported and consequently escaped the attention of the public health officials and could not be isolated, that a system now known as medical inspection of school children was first introduced

Medical inspection of schools, as it is better known, comprises at the present time not only the detection of contagious diseases among school children but also the detection and correction of physical defects and the study of mental defects, but it was originally planned for the purpose of detecting cases which otherwise escaped the attention of the authorities

In considering the isolation of cases of contagious diseases, the question of hospitalization comes to our mind and with it the fact that many cases of contagious diseases cannot be properly isolated in private houses I would not take the position that all cases of all contagious diseases, including typhoid and tuberculosis, should be hospitalized, but on the other hand, I think it is absolutely necessary for the success of the preventive measure known as isolation that in each municipality there should be a properly equipped and constructed municipal hospital for contagious diseases under the control of the board of health in which such patients as cannot properly be isolated in their own homes may be cared for By having facilities for early reception of such patients, it will be possible to reduce not only the morbidity but also the mortality from contagious diseases

Disinfection is the one method of the three that I have mentioned that has been bitterly attacked by some progressive sanitarians, among whom may be mentioned Dr Charles V Chapin, of Providence, R I In a paper[1] read before the American Public Health Association in 1910, Dr Chapin took the position that "terminal disinfection," or disinfection of a room or house after a case of contagious disease has been terminated, really has no value, and he showed by a series of figures that in Providence, where "terminal disinfection" had been discontinued, the results obtained with regard to additional cases arising in the houses in which there had been an original case, were almost as good without "terminal disinfection" as when it had been performed In spite of this opinion, and the opinion of other progressive men, the fact remains that "terminal disinfection,' properly done, does disinfect, in other words, that formaldehyd used in sufficient quantities for sufficient lengths of time, in a room which has been properly prepared, does destroy such infection as may be within the room Of course the method of disinfecting for the purpose of controlling the spread of contagious diseases should not be limited to terminal house disinfection by formaldehyd or sulphur, but should consist in a disinfection during the course of the disease of everything that has been known to have become infected All materials which have no intrinsic value and which have become infected by contact with the patient during the course of the disease should be destroyed by fire, and whenever this procedure cannot be followed, we should resort to boiling, immersing in chemical solutions, or some other method equally satisfactory

If it were possible to apply one or more of these methods, namely, immunization, isolation and disinfection to all of the communicable diseases within a municipality, there can be no question but that the result

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* Read in the Section on Preventive Medicine and Public Health of the American Medical Association at the Sixty Third Annua Session held at Atlantic City June 1912

[1] Chapin C V The Value of Terminal Disinfection Jour Am Pub Health Assn., January 1911.

would be favorable, and the number of cases of such diseases held under control, but considering the appalling ignorance on the part of the public of these diseases and the manner in which they are spread, we have before us, as I have said earlier in my discussion, a problem of education

EDUCATION AS TO CONTACT INFECTION

It seems to me that the public health official who hopes to accomplish much in the future in the control of contagious diseases must be the one who will best educate the public in his community in the necessity for such control In speaking of the need of education among the general public, we must not forget that the *medical profession needs some instruction.* While it is true that the majority of the profession are in the front rank of our work for the prevention of disease in all of its phases, it is equally true that a good-sized minority are absolutely indifferent and many of them ignorant in this respect

In the campaign of education which it is necessary to conduct vigorously for the control of contagious diseases, we must first correct some erroneous ideas which have existed in the minds of the public and of some physicians for years The theory of aerial convection of contagious diseases must be eliminated from their minds, and the fact that all of these diseases are transmitted by direct or indirect contact substituted in its place So long as the people and many of the medical profession believe that these diseases are spread broadcast through the air, just so long will it be difficult, if not impossible, for us to make much headway in our fight against their spread Not many years ago nearly all text-books on contagious diseases took the position that while all of these diseases are certainly transmitted by contact directly or indirectly, they may also be carried through the air for a shorter or longer distance The most modern text-books deny that any of the acute contagious diseases are carried through the air except small-pox, and for some unaccountable reason nearly every author makes an exception when it comes to a consideration of this particular disease As far as my experience goes, I am just as convinced that small-pox is not carried through the air as I am that scarlet fever, diphtheria, measles and other acute contagious diseases are not transmitted in that way During the winter of 1902-1903 there were 1,023 cases of small-pox in Detroit, and the outbreak began in the Polish district of the city The cases did not spread from one house to the next as might be expected had they been transmitted through the air, but they went from one family to the family of a friend or relative who lived, in some cases, a short distance, in others a considerable distance away, but had been in contact with the infected household In this epidemic it was possible to trace the origin of nearly all the cases, and never did we fail to find direct or indirect contact as the cause of the transmission of the disease According to the old theory, the "striking distance" of small-pox is several thousand feet During the past ten years we have treated nearly 1,500 cases of this disease at the municipal small-pox hospital, at one time we had 104 patients confined there, and during all of these years we have had but three cases within the reputed "striking distance" of the hospital These cases were contracted from other cases outside of the hospital with which the patients had, to my personal knowledge, been in contact

The building which had been occupied in 1902-1903 by this large number of patients with small-pox has since been remodeled and is being used as a tuberculosis sanatorium and hospital, and the small-pox patients are kept in a separate building, but located on the same grounds and not more than 500 feet away Before this complete change was made, the small-pox patients were confined in one part of the large building and the tuberculosis patients in another part with an air-space of only 3 feet separating the two, during that time and since then, no case of small-pox has developed on the grounds outside the small-pox hospital, without reference to the vaccination status of the patients admitted to the tuberculosis sanatorium

It is my opinion that not only the acute contagious diseases including small-pox, are transmitted by direct and indirect contact alone, but that this applies with almost equal force to such diseases as were formerly classed as infectious, of which typhoid fever and tuberculosis are the type It is undoubtedly true that typhoid epidemics are traceable to infected water- and milk-supplies, but we have cities in which the water-supply and also the milk-supply, as a whole at least, are beyond suspicion and in which we have every reason to suppose that they are safe as far as typhoid infection is concerned I believe Detroit is such a city There may be, and occasionally there are, cases traceable to infected milk from an infected dairy, and I have traced such cases, but as a whole as I have said, the milk-supply is not infected or we would have many more cases How then, is the disease transmitted? In the very interesting and thorough investigation made of the cause of the transmission of typhoid in the United States Army during the time of the late war with Spain by a committee appointed by the government, of which Dr V C Vaughan of the University of Michigan was chairman, the conclusions, as I remember them, were that the disease was spread in three ways, and in the order of frequency they were (1) personal contact, (2) flies, (3) water-supply All the latest studies of the subject in Germany lean toward the side of direct personal contact rather than the indirect one of transmission by flies and infected water if, indeed, these modes of transmission may be considered "contact," as I would have you believe Certain it is that no one nowadays adheres to the theory of air-convection as far as typhoid fever is concerned

With tuberculosis the proof of "contact infection" may seem even farther away to some than is the case with typhoid, and yet the more this disease is studied, the more evident its method of transmission becomes Not many years ago it was believed that the disease was hereditary, but bacteriology turned on the light and dispelled this erroneous theory Now we know that consumption is spread from infected persons, principally by the "droplet method," which certainly requires close proximity on the part of the victim, or by means of particles of dried, infected sputum gaining access to the mucous membranes of the mouth and throat of the susceptible individual But is it not reasonable to believe that in the great majority of cases this infected material may be brought to the lips and mouth of the victim by his own fingers which have become infected in one of the many ways in which this is possible? Or if a man, perchance carry some infected material on the bottom of his trousers or even on his shoes and then come into close proximity with these infected articles, is not that contact infection? If consumption were so universally carried through the air as has been supposed, would there not be more cases even than there are now? Certainly not so many of us are immune to the di-

REPORTING VENEREAL DISEASES

The first step necessary in our campaign of education, then, is to teach the public something about contact infection, and in this instruction we must not forget to lay emphasis on the fact that contact resulting in the spread of the disease may be had not only with the patient himself, but *with an infected person or thing*, and under this head let us not forget the danger of the ever-present house-fly. The fly that has been in contact with the patient certainly becomes an infected "thing," and one which may be the cause of our taking the disease from which the patient is suffering. As we progress in our campaign of education, it is necessary for us constantly to add to our list diseases to which formerly little attention was paid. In scientific discussions of the past, a fine distinction can always be found between contagious and infectious diseases, and yet there is one class of diseases which is certainly contagious, which is dangerous to the public health, and which is perhaps more prevalent than any one of those which have received more attention at our hands and which, until recently, has been mentioned, if at all, only in a whisper. I refer now to the venereal diseases. The time has come when the public must be taught to lay aside false modesty and prudery and must learn something of the terrible results and of the immense mortality following attacks of gonorrhea and syphilis. Here again is an example in which the method of isolation, so highly recommended, has failed utterly in the past because of the fact that the cases are not known to the public health official whose duty it is to isolate them. Each municipality should have a properly equipped hospital for the reception of the most infectious cases of this kind.

In order that cases of venereal diseases may come under control of public health officials, they should be reported just the same as other contagious diseases, but a mere suggestion even to the medical profession that venereal diseases be reported to public health officials encounters disapproval. At a recent meeting of the Michigan Health Officers Association I had occasion to talk on this subject and made the suggestion that the association endeavor to secure legislation during the next year requiring the reporting to public health officials of cases of venereal diseases. The suggestion met vigorous opposition on the ground that physicians would not report such cases and could not be asked to do so. Ten years ago the same opposition was met when it was suggested that tuberculosis be reported. It was argued that the disease was not contagious in the same sense as is, for example, small-pox, that the board of health would isolate all cases and placard the houses, that a patient should not be told when he is suffering from tuberculosis and that the public should not be told about *the affliction of the patient*. All of these objections have been met and overcome and tuberculosis is now being reported at least, in most cases. In the case of venereal diseases the objections could be even more easily met. The diseases are certainly contagious, as much so as any acute contagious disease that can be mentioned. It will not be necessary to isolate all cases and placard the houses, it is certainly wise and proper to tell a patient when he is suffering from either of these diseases, and as far as the publicity of the report is concerned, that can be overcome in the same way as has been done in laws requiring the reporting of cases of tuberculosis by providing for a protection of the records and making it a violation of the law for the health officer to divulge any of the information contained in the report except for the purpose of enforcing the tuberculosis law itself.

CONTROL OF TUBERCULOSIS

The good results attending the campaign of education for the control of contagion in a municipality are perhaps best seen in the case of tuberculosis. A few years ago this problem looked so large that it seemed impossible to know how to take hold of it, but now the work has become systematized in most cities to such an extent that it is moving along as easily as the work for the prevention of any of the other diseases. In Detroit we had no knowledge of the whereabouts of our cases of tuberculosis until about six years ago. At that time an effort was made to do something in the way of control of this disease, and the first thing necessary was to locate some of the cases. Accordingly, a nurse undertook a house-to-house canvass for the purpose of educating members of the household in the prevalence and danger of tuberculosis and in the methods of its prevention, and *incidentally for the purpose of locating some cases of this disease*, at the same time a clinic was established in charge of a physician and nurse in the board of health building for the purpose of examining such applicants as might apply, and to give them medical advice and, if necessary, a proper diet. It was not long before a number of cases were located, and subsequently the Municipal Sanatorium was started for the reception of the most infectious cases. Now we have nearly 400 patients under the care of the board of health physicians and nurses outside of the sanatorium, and seventy-five constantly receiving sanatorium care. In the meantime and partly as a result of the work done in Detroit, a law was passed by the state legislature providing for the reporting of all cases of tuberculosis in Michigan, and while this law is not being universally obeyed, it has had the effect of adding a great many cases of tuberculosis to the statistics of the departments of health of the state and of the various municipalities, and has given the health officials an opportunity of having general supervision over all these cases.

REDUCTION OF INFANT MORTALITY

Again, the good effect of an educational campaign conducted by the department of public health can perhaps best be seen in the work that is being done all over the country for the reduction of the excessive infant mortality. In Detroit there was a reduction in the number of deaths under 1 year of age during the four summer months, June to September, 1911, as compared with 1910. This reduction was due to a great extent at least to the instructions given by the board of health nurses to mothers on infant hygiene, to the advice and medical attention given babies and mothers in the mothers' clinic at the board of health building, and to the careful supervision of the milk-supply by the milk inspection department. The instruction referred to was given by six nurses who visited the homes when babies were born and told the mothers how to keep the babies well. During the winter months the same nurses act as school nurses in our city, during those months, when it might be expected that it would be easier to reduce the infant mortality, the reduction in 1911 over 1910 was only very slight. During the four summer months there were 139 less deaths in 1911 than in 1910 and during the remaining eight months the total reduction was only ninety. This seems to indicate that what is necessary for the promotion of this sort of public health work is instruction, and as far as possible, instruction by word of mouth from the public teacher to the community

What has been said about the work for the prevention of tuberculosis and for the reduction of infant mortality applies equally well to the restriction of all contagious diseases It is necessary for a progressive department of public health to have a large corps of competent trained visiting nurses, the larger the number and the more trained, the better Each case should be promptly reported to the board of health and, after being properly recorded, it should be investigated by a nurse In her investigation the nurse, besides giving instruction to the family in the prevention of the particular disease, could make a note of the housing condition of the family and in this way this most important branch of public health work would receive proper attention and this predisposing cause of contagious disease — insanitary housing — would be much improved

In closing I desire to say, as I said in the beginning, that the control of contagious diseases in a municipality must be accomplished by education, and this education can best be given to the public by trained nurses in the employ of the board of health

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS DUTTON AND KIEFER

Dr. Pauline M. Townsend Hanson, Marshalltown, Iowa To my mind, the idea of reporting, quarantining and confessing about other diseases and not reporting the social diseases has been a farce for all these years Who that understands would not rather have small pox than have one of the venereal diseases? Dr Dutton suggests laws requiring the cleanliness of patrons at a restaurant before eating their meals, and that all public eating houses shall have provision made so that the diner may wash up before eating This we all know would add to the cost of maintaining eating establishments and add to the final cost of the meal Thousands of the well fed do not realize the effect of 10 cent meals If any physician of the American Medical Association had to live on 10-cent meals three times a day for a year, that physician would be very apt to feel sick and grievous, but there are thousands of men women and children who cannot afford ten cents three times a day for a meal. It is a great deal more insanitary to be without a meal entirely than it is to eat a dirty meal. These people who cannot afford the ten or fifteen cents to pay for their meals go to the garbage barrels to find their food and dirt on the hands is as nothing to the dirt that is found in the food thus gathered All the dirt on hands which is conveyed to the mouth by the handling of food in eating is as nothing to the dirt that is found in the food during its manufacture from the original products, laws that merely require cleanliness of the things that are going on the table will not touch the problem until there is supervision of food from start of manufacture to eating time In connection with this problem, comes the problem of poverty In this day of speedy processes of manufacture of increased scientific knowledge and of rapid production, it is a disgrace that we have poverty existing in America *or anywhere else in the world. It is not at all necessary*, it is one of the things we have to get rid of, and it is one of the problems for this section to take up I do not see why we could not have a committee from this section to investigate into the matter of the speediest method of doing away with poverty in America just for sanitary reasons

Dr Otto P Geier, Cincinnati Cincinnati is building a municipal hospital which will cost over two million dollars It was with a great deal of difficulty that a few of us were able to impress on the hospital commissioners that it was safe to place the small pox hospital near the group of contagious disease buildings Every speaker this afternoon has emphasized the need of education Dr Kiefer speaks about the public teacher Who is properly the public teacher? Dr Kiefer says the public teacher should be the nurse In this crusade of preventive medicine we are gradually narrowing the field of the physician Most of them are cooperating with the health officer in bringing about this lessening of their field and it is to their credit There is a minority who cannot cooperate because with them it is a matter of bread and butter Possibly in discussing these questions we have overlooked the economic side Should we not make the physician a part of the program of public educational work? It is said that the average income of the physician in the country to day is a thousand dollars a year I would like to suggest this question to Dr Kiefer Do we properly value the physician in this program of education? Are we replacing the work which we are taking away from him by preventive medicine? In this campaign of education we must, in self-defense, take care of the physician if we care to have this work progress to its ideal limit If we do so, it will first bring into line that small minority who are fighting for their bread and butter and lastly I think it will bring a better recognition from the public itself, because, after all, free service is never appreciated

Mr. W A. Howe, Albany N Y It seems to me we ought to be willing to do more for the general practitioners They are the men who are suffering most and who will continue to suffer most from this progressive wave of preventive medicine If we are going to conduct a campaign of education along these lines let us utilize for that purpose the family physician that he may profit rather than suffer therefrom Let him be the teacher as he is so well fitted to be, the cooperator, the contributor to our success Within the last three weeks we have placed in the hands of every member of the graduating class of every medical college of the state, a package of literature bearing on public health This contains the Public Health Law various leaflets published by the Department on Communicable diseases and much other material instructive and useful to them as prospective practitioners We are endeavoring to acquaint them with the various resources of the department and to urge their more liberal employment by the medical profession We are endeavoring to cultivate a closer cooperative plan between the medical profession and our department, believing that no department of health can be stronger than that which is measured by the willingness of the medical profession in its cooperation We believe that just in proportion as we can interest the practitioner in our work so are we going to succeed, and that just in proportion as we embarrass the practitioner or discourage him so will success with us be impossible So thoroughly convinced are we in New York of the necessity of this line of activity that steps have already been taken to introduce into the various medical colleges a uniform course of instruction in public health This plan has already been approved by the deans of several of our leading medical colleges, and it is my expectation that it will receive their unanimous consent within the next fortnight Our scheme includes lectures by representatives of the State Department of Health, field instruction to the medical students by the municipal health authorities, and instruction by members of the faculty of the several medical colleges We also hope to perfect the plan in such a manner that one lecture will be given in each of the ten medical colleges by a representative from each of the other colleges on some subject pertaining to public health This educational movement among the medical colleges we regard as highly important believing that by successfully conducting it, within a few years we will secure a large number of medical men trained in at least the rudiments of sanitation, far better capable of making efficient health officers and more susceptible of interest in public health questions This is one of the lines of practical public health instruction which I believe we as health workers must encourage and promote

Dr Seneca Egbert, Philadelphia The question of popular education in public health work is an old one As a matter of fact it seems to me that we must realize that the greatest field of work is among the laity Under force and stress of public opinion we have moved our municipal hospital in Philadelphia miles away from the center of the city It would be much better for Philadelphia if we could have a number of sec tional hospitals, each serving its own neighborhood We might easily enough have these hospitals for infectious diseases if we could get rid of that bugbear in the minds of the people that if there is small pox or scarlet fever on the other side of the street it is going to be dangerous for people who live on this side We know that that is largely nonsense I believe with Dr Kiefer that the theory of the air transmission of small pox is largely a fallacy to day We owe a great deal to Dr Chapin of Providence for what he has taught us, although we may not agree with him entirely

When we can impress on the people the importance of vermin, the fly, the bedbug, etc, and when we can get the public to realize that contagious diseases are transmitted by such agencies or by contact and not by germs floating through the air, then I think we can get people to appreciate what they must do in order to eradicate these diseases, and we can then get to the point where we can have the hospital in the vicinity of the home One can scarcely blame a mother to-day for objecting to send her child with measles or scarlet fever to a hospital which is possibly a day's travel distant I am not much in favor of compelling people to do things by law which they do not understand and which they do not want to do I think we are teaching the people in Philadelphia how to take care of their babies For instance, Dr Neff's reports for certain wards show a considerable saving of infant life It is because the people have been taught, and because many of our health inspectors have been brought into contact with the people and have been able to show them that their neighbors' children were doing the damage in spreading the disease and that they themselves could help in checking it I know that this matter of popular education will appeal to people if we can put it in the right way A great many of our social workers are doing splendid work, but we must not forget that not every person can go out and teach health matters without preliminary training, it takes considerable training before people are able not only to teach but to get those whom they are teaching to absorb and apply what is taught

Dr Mary Dunning Rose, New York Nurses will work for $1,000 a year or less and give their entire time If physicians were asked to do for $1,000 a year the district work which these nurses are doing, and devote their time to it, I think that but few would respond to the call Again, if the number of physicians who register in the United States continues to diminish—there were more than a thousand less in 1911 than in 1910—it seems as though it will not be many years before physicians will be able to obtain more than $1,000 a year, even though preventive medicine is pushed forward as rapidly as possible

Dr. Walton Forest Dutton, Carnegie, Pa I do not think the scope covered by my paper was at all too broad The suggestions relative to the sanitary control of public eating and drinking places are appropriate to present day conditions If we will stop and consider just for a moment, we fully realize the necessity for such laws as I have advocated Since this paper was written, four cases of gonorrheal ophthalmia have come under my service The infection was directly traceable to a towel used in common by the men and boys employed in a certain part of a mill Another patient employed in a down town office gave about the same history

Some days ago while drinking at a soda fountain, I saw the same glass and spoon which had been used by a person who had a chancre at the angle of the mouth, rinsed off hurriedly, not washed, and placed on the working board Ten minutes later I saw the same glass, and spoon, filled and handed over to a little girl about 10 years of age In the name of Him who said 'Suffer the little children to come unto me," is there no help? Must we work and wait on the education of the masses and in the meantime sacrifice the lives of thousands of men, women and children to years of loathsome disease, suffering and death?

For the sake of the innocent mother, sister or child in your own home or that of your brother who must of necessity patronize public eating and drinking places, assist in enacting laws which will be an honor to yourself, to your neighbor and to your country

Dr Guy L. Kiefer, Detroit I agree with Dr Howe in his statement that the principal thing necessary for the success of public health and work is the cooperation of physicians, and, of course, the cooperation of the people There is no question about that I desire to emphasize what I have said about employing nurses as teachers In the first place, as Dr Rose said, you cannot get many physicians to devote all of their time to the work for $000 a year, in the second place, the more of this educational work there is done, the more successful your public health work and the more business you make for the physicians There are always going to be people in every community who are going to employ the physician to do the very thing that the nurse is doing through the public health department I agree absolutely that sanitary education is better than sanitary legislation You cannot enforce legislation unless you have the education and the public sentiment back of your laws, but the way to give the people this education is by sending a nurse to the house, because, while the physician might in many cases be more able to give knowledge, people will not listen to him as they will to the nurse. The nurse goes to the home and talks to the mother, who will not listen to the physician If physicians go around giving this education, the physicians at large will think that the former are getting into their families, and there is the question of professional jealousy

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PROCEDURE IN QUARANTINE PRACTICE

DESIRABILITY OF THE RECONSIDERATION OF PRESENT METHODS, ESPECIALLY IN RELATION TO THE "MINOR" INFECTIOUS DISEASES *

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Quarantine has been defined as "the adoption of restrictive measures to prevent the introduction of disease from one country or locality to another" In the broader sense, therefore, it includes many measures, following the notification of disease, to prevent the transmission of the infection from the sick to the well Among these measures may be mentioned placarding of buildings, observation and surveillance of patients and contacts, prohibition of public funerals, disinfection, etc

In recent times, inquiries have been frequently made to determine the degree of uniformity that prevails regarding restrictive measures and their manner of enforcement by health authorities to prevent the spread of diseases such as diphtheria and scarlet fever These inquiries disclosed the facts that while placarding, isolation, disinfection and prohibition of public burials were in general insisted on, great differences existed in the provisions governing the character and duration of isolation, because of diversity of opinion with respect to the modes of infection and the period of infectivity

The object of this paper is not to deal with such measures as placarding, disinfection, etc, in regard to which more or less uniformity exists, but to invite attention to those provisions relating to observation and surveillance of infected and exposed persons

REASONABLE AND UNIFORM PROCEDURES

One of the principles governing the conduct of quarantine is that it should be reasonable and based on scientific knowledge respecting the period of infectivity and modes of transmission of communicable diseases. Quarantine of places, persons and things should extend

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over the least possible period of time consistent with safety, should cause the least possible expense and inconvenience, and should be reasonably effective in preventing the transmission of infection to other localities

The great importance of reasonable and uniform procedures has led practically all civilized countries to enter into international agreements, in which are specifically outlined the quarantine restrictions to be observed by the respective governments for the control of certain diseases These diseases are plague, cholera and yellow fever This international cooperation suggests like action on the part of state and local governments looking to the adoption of definite and uniform methods of procedure in local quarantine practice That there is need for greater uniformity is evident

In practically all of the states and territories the duration and conditions of quarantine in different diseases are specified by the regulations of the respective state and territorial boards of health In certain jurisdictions, on the other hand, such as the District of Columbia, Ohio, Delaware, Idaho and Utah, the duration of quarantine of certain specified diseases is fixed by law In Iowa quarantine may be imposed only in cases of scarlet fever, small-pox, diphtheria, cholera, leprosy, cerebrospinal meningitis, plague and anterior poliomyelitis

In all of the states and territories, patients may be quarantined at their residences In practically all depending on the disease, they may be removed to a special hospital or other place, and in many there is specific authority to establish contagious-disease hospitals Under certain conditions removal of patients to a hospital is made compulsory in certain states, but in Indiana and New Jersey no person may be so removed except on the certificate of two physicians

In some jurisdictions the duration of quarantine is left to the judgment of the local health authority or physician in charge, and in the several states there are great differences as to the length of isolation in the disease subject to quarantine

EXISTING REGULATIONS

From a collection of the health laws of the several states and territories which I have made and analyzed to some extent a striking variation is revealed in the length of quarantine of the minor diseases A summary of some of these data will be presented to point out such variations and to emphasize the desirability of greater uniformity in view of existing knowledge regarding the causes and methods of transmission of communicable diseases

Small-pox is usually classed as one of the "major" infectious diseases, but it may be cited as an excellent example of the points that this paper is intended to emphasize Although the period of incubation has been more definitely determined in this than in most other diseases, the duration of quarantine of exposed persons varies in the several states from ten to twenty-one days, the stated period depending on vaccination and other conditions Vaccination is recognized by sanitarians generally as a reliable preventive of small-pox, yet in many jurisdictions quarantine of exposed persons is required even after successful vaccination for periods varying from ten to twenty days

Small-pox patients are also subjected to varying periods of isolation after recovery and disinfection For instance, in North Dakota it is five days, and in the District of Columbia, sixteen days In other states numerous periods are fixed from twenty-one to forty days from date of onset and in still others the time of release is fixed by the health officer or physician

Even greater differences exist in the periods during which persons shall be excluded from school on account of small-pox In all the states, either the laws or the regulations require the exclusion from school of persons from infected premises during the period of quarantine and in some states the period of exclusion is prolonged for subsequent periods varying from seven to fifty days

DIPHTHERIA

In the case of diphtheria, which has been declared contagious, infectious or dangerous to the public health in practically all the states and territories, some form of quarantine or isolation is usually required In a number of states these different forms have been classified as "absolute,"[1] "modified" or "special," the modified form being generally practical even in those states where absolute quarantine is prescribed

Duration of Isolation of Diphtheria Patients—In a large number of states and municipalities the period of quarantine of patients is determined preferably by the culture method, but there is variation in the number and time of making the cultures For instance, in the laws and regulations of eight states examined, two negative cultures are required to be obtained twenty-four hours apart In five other states only one negative culture is required, in four others two cultures taken two or three days apart, and in three others the number is not specified Out of twenty cities whose ordinances were examined, ten likewise require two cultures taken twenty-four hours apart, six require one culture, and two do not specify the number or time of taking

In some of the states and cities the length of quarantine is specified in case cultures are not made These periods, following the disappearance of all signs of the disease, are in one state, five days, in one, fourteen days, in eight, twenty-one days, and in two, twenty-eight days In other states, in the absence of cultures, the number of days of isolation prescribed dates from the beginning of the illness or report of the case, and is variously stated to be twenty-one, twenty-eight, thirty and forty-two days In those states and municipalities in which the taking of cultures is not prescribed, the duration of isolation of patients is variously stated to be from ten to thirty-five days from date of onset of the illness or report of the case

Isolation of Exposed Persons—In some states as in Ohio, the duration of isolation of exposed persons is prescribed by law to be the same as for patients In others the time is fixed by regulation with reference to the last exposure, and is variously stated to be from four to fourteen days For instance, in North Dakota it is at least four days or until negative cultures are obtained, in Idaho, five days, in Washington, ten days in the case of children, and in Michigan, fourteen days

Exposed persons usually comprise the members of the family or persons in the house, and in a number of states, as Idaho, Montana, Michigan, North Carolina, South Dakota, Utah and Wisconsin, the length of quarantine applies to all, regardless of age In other states, children in the same house are isolated for longer periods than are adults In Virginia, isolation ordinarily applies only to persons under 15 years of age

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[1] Absolute ' quarantine implies absolute prohibition of entrance to or exit from quarantined premises Modified quarantine allows under certain restrictions the passing in and out of persons in the family Special quarantine merely prohibits the patients from attending public assemblies and sleeping with others and requires the use of separate eating utensils towels etc

In a large number of states, quarantine terminates after death or recovery of the patient and disinfection of the premises, but in some states the time is prolonged in the case of children In Georgia this additional period of isolation is stated to be seven days after disinfection of the premises In Indiana and Oregon, children, like adults, may be released following disinfection if they receive an immunizing dose of diphtheria antitoxin of at least 1,000 units In Iowa, quarantine must be prolonged for ten days when children are present in the house, unless negative cultures are obtained and the children recently immunized with antitoxin

Diphtheria serves as a good example of the enforcement of modified quarantine In many jurisdictions, as Iowa, Minnesota, Nebraska, Pennsylvania and Wyoming, modified quarantine is prescribed in the interest of wage-earners or heads of families working under certain conditions and observing certain precautions

In Iowa, bread-winners may at the discretion of local health authorities follow their occupations, provided they change clothing on leaving and entering the house, and do not enter the sick-room

In Nebraska, bread-winners and heads of families, if not teachers or persons associated with children, or employed in the milk industry, may be allowed to follow their vocations, provided they change their clothing on leaving and entering the house, and do not attend public meetings

In Pennsylvania, wage-earners are allowed to continue work, provided they do not come in contact with the patient or persons caring for him, and provided they are employed in industries other than the production, manufacture or sale of fabrics, wearing apparel, upholstered furniture, foodstuffs, milk, cigars, candies, etc If so employed, it is specified that they should submit to disinfection and remain away from the premises during quarantine.

In Virginia, all adults over 15 years of age may follow their vocations if not engaged in the production or sale of milk or food, or employed in factories, schools, offices, stores or other places where persons under 15 years are employed, and provided that they do not enter any school, place of public amusement or other place where children are in attendance

Exclusion From School on Account of Diphtheria—Exclusion from school on account of diphtheria usually applies to both patient and children and sometimes to adults in the same house The lack of uniform requirements is striking The length of time varies according to different state and municipal laws and regulations According to some the time ends with the removal of quarantine, and according to others, seven, ten, fourteen and even thirty days later In at least eleven states the period of exclusion extends until the health authorities issue certificates or give permission to return to school In Porto Rico, such certificate or permission may be issued by the attending physician

The culture method is apparently prescribed in only a few state regulations as the means to determine the length of exclusion from school In Massachusetts, convalescents are by regulation permitted to return seven days after the second negative culture has been obtained from the nose and throat and when the physician certifies that all danger has passed, in the case of other children in the house only one negative culture is required

In cities the culture method appears to be more generally depended on, some allowing school attendance as soon as one or two negative cultures are obtained, others requiring an additional absence for seven days or longer In Providence, R I, children in the house are allowed to return after the removal of quarantine, in the better families only one culture is required, and after the expiration of one month all children are usually admitted even if they are bacillus-carriers

SCARLET FEVER

Scarlet fever, like diphtheria, is subject to control by law or regulations in practically all the states and territories, but the control varies much

Duration of Isolation of Patients—In a number of states isolation of patients is required by regulation to be continued until desquamation is complete In some other states regulations require that quarantine of patients shall continue for varying periods after this event has occurred In North Dakota it is five days, in Maryland seven days, and in Georgia, Idaho, Oregon and South Dakota ten days In other states, in addition to completion of desquamation, the absence of other symptoms, including disappearance of inflammation of eyes and respiratory tract, or stopping of discharges, is required In some of these states a minimum time limit is also specified, which is variously stated as twenty-one, thirty, thirty-five and forty-two days

In those states where a time limit only is specified it is variously stated as twenty-one, thirty, thirty-five, forty-two and forty-nine days In Delaware and Ohio the time is ten days following terminal disinfection Regulations in Pennsylvania, in addition to other requirements, specify that the physician must certify in writing that desquamation has ceased and nasal irritation and ear-discharges have healed

In a considerable number of other states the duration of quarantine is not specified except that it shall continue until death or recovery of the patient, freedom from infection, etc

Similar variations exist in the requirements of cities studied, the minimum periods of quarantine being variously stated as fourteen, twenty-one, twenty-eight, thirty, thirty-five and forty-two days In Chicago, in addition to cessation of desquamation and a specified limit of one month, examination by a health inspector is required before removal of quarantine

A committee on communicable diseases of the American Public Health Association in a report[2] on the practice prevailing in eighty-seven cities in which 52,620 cases of scarlet fever were reported in 1910, states that sixty-four of the cities had a minimum period of quarantine which varied from ten days to six weeks This report states further as follows

> In fifty cities the board of health inspects the patient after the report of recovery before release, while the remainder rely on the report of the family physician The cessation of desquamation is the sign of readiness for release in fifty nine cities, although fifty six pay some attention to the condition of the nose and throat Only four will release a patient when nose and throat appear normal, paying no attention to desquamation, and eleven will release when desquamation has ceased even though a nasal discharge exists

Quarantine of Exposed Persons—Quarantine of exposed persons appears usually to apply only to children, but it is stated in the report quoted that in thirty-nine out of eighty-seven cities, all the members of the family are segregated during the continuance of the disease

In some states, by regulations, quarantine of exposed persons continues during isolation of the patient These apply in some states, as Illinois and Virginia, only to children, and in others, as Nebraska and Montana, to all persons in the house In a considerable number of states, modifications similar to those in diphtheria are made in the case of wage-earners In Iowa the regulations prescribe, in case of death of the patient, that the quarantine of exposed persons shall continue ten days thereafter, if there are children in the family

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[2] Am Jour Pub Health, 1912 ii 121.

Seven, ten and fourteen days after the last exposure are variously prescribed in regulations of other states, but these requirements affect only children, and in North Carolina the requirement does not apply to persons who have had the disease and who submit to disinfection

In a number of other states, quarantine of exposed persons is by law or regulation extended ten days after recovery of the patient and disinfection This in some instances applies only to children and in others to all persons in the house The regulations of Minnesota require extension of quarantine for twenty-one days from the appearance of the last case, wage-earners being exempted as in diphtheria

Exclusion From School —In many states, children and sometimes all persons in the house are required to be excluded from school on account of scarlet fever until release of quarantine and presentation of certificate of discharge In other states, exclusion is continued after release of quarantine or disinfection for variously stated periods, as seven, ten, fourteen, twenty-one and thirty days These requirements in most instances relate to convalescents, but in some, to other children in the house When exposed persons are removed from the house, the period of exclusion is variously fixed at ten and fourteen days

When no definite time is fixed, permission for readmittance to school is required to be furnished by the health officer at his discretion

In the regulations of a number of cities studied, the requirements presumably with respect to convalescents are stated in effect as follows seven, ten, fourteen and twenty-one days from release of quarantine, and thirty-five and forty-two days from the beginning of the disease In other cities the period of exclusion, presumably of children in the house, is twenty-eight and forty-two days from the beginning of the last case

Other variations might be mentioned, but these represent the usual requirements and serve to emphasize the decided lack of uniformity that exists

MEASLES

In the case of measles, the disease is referred to for purposes of control in the laws and regulations of thirty-four states and territories The control is in a number of cases limited to the reporting of cases, and in others to requiring placarding or exclusion from school

Requirements Respecting Isolation of Patients — Requirements with respect to isolation of patients are variously stated in the above-mentioned laws or regulations For instance, in Maryland the duration of isolation is stated as fourteen days after the disappearance of the rash, in New Hampshire and North Dakota at least fourteen days presumably from the date of the beginning of quarantine, in Indiana at least fourteen days or until desquamation has ceased, in Missouri, Pennsylvania and Vermont twenty-one days and in North Carolina twenty-eight days In North Caroline this time may be reduced at the discretion of the health officer In Vermont it is also stated that quarantine shall continue until all complications are over, and in Pennsylvania, until the physician certifies in writing that the patient is well and that nasal irritation and ear discharges have ceased

In the District of Columbia, Tennessee and Utah, isolation is specified to be continued until recovery, in New York, until skin and mucous membranes are clear, and in some other states, as Michigan, it terminates at the discretion of the health authority In Kansas and Virginia, placards only are required

Quarantine of Exposed Persons —Quarantine of exposed persons, when required, generally applies to children in the same house, who are usually not allowed to leave it In North Carolina the period is fixed at fourteen days after the last exposure

Exclusion From School —In the case of convalescents, the stated requirements are various In a number of states, it is provided that they may be readmitted after recovery or release of quarantine In others, the period is prolonged five, fourteen or twenty-one days beyond such release In still other states, the duration of exclusion is left to the discretion of the health authority

In some states, other children in the house are by regulation permitted to attend school if they have had the disease, and there are provisions in several states authorizing children in the same house to attend school ten or fourteen days after removal to another house In Pennsylvania this applies if the house to which they are removed is occupied only by adults

In a number of cities, the period of exclusion from school is variously stated as follows until subsidence of catarrhal symptoms, until recovery or removal from quarantine, seven and fourteen days after recovery, fourteen and twenty-one days from appearance of eruption, and twenty-eight days from beginning of the disease

In some of these cities, other children may be readmitted fourteen days from the appearance of the last case in the house, or in twelve or more days after removal to another house

PRACTICAL APPLICATION OF EPIDEMIOLOGIC AND LABORATORY DATA DESIRABLE

In combating diseases, recourse has been made to isolation to meet not a single condition, but many conditions It is apparent therefore that some variations will of necessity prevail, but they should be as few as possible and based in so far as practicable on accurate data

By careful studies, it would be practicable to bring about greater uniformity than at present exists The results of experiments and laboratory investigations should be utilized, and further investigations made to determine definitely the period of incubation, virulence and viability of infections, modes of transmission, etc, of the diseases in question

Additional facts and opinions have recently been deduced as a result of laboratory studies and epidemiologic work which would justify some modification of quarantine procedure in certain of the communicable diseases For instance, Anderson and Goldberger, working in the Hygienic Laboratory, have shown that the period of infectivity of the blood of measles patients begins at least some hours before the eruption appears, and continues for about thirty-six hours thereafter, and that mixed nasal and buccal secretions are infective about the time of the eruption and forty-eight hours later These observers were unable to infect monkeys with "scales" from measles, and think it highly improbable that desquamated epithelium carries the virus of the disease Lucas and Prizer have likewise shown that the virus of measles is present in the blood-serum at some time exceeding twenty-four hours before the appearance of the Koplik spots and persists more than thirty-six hours after the appearance of the skin eruption On the basis of this work, it would probably be possible for the quarantine of measles patients to be reduced from the usual period of twenty-one days to not more than fourteen days from the beginning of illness, and probably twelve days Similar data with respect to other diseases should be brought together and considered with the view to their practical application in quarantine practice

ABSTRACT OF DISCUSSION

Dr Alexander C Abbott, Philadelphia Dr Kerr has shown us that many of our quarantine methods are not in accord with the newest knowledge In measles, for instance, no account is taken of the latest experimental results In scarlet fever we still lay stress on the desquamated particles as the carriers, whereas our English confrères have for several years been showing us that the disease is more often spread through discharges from the nose and throat than by scales from the skin In diphtheria, we rely on two negative cultures as evidence that the convalescent is free from danger, yet we know that this is not a reliable guide Repeatedly we have observed convalescents at the Philadelphia Hospital for Contagious Diseases whose upper air passages were free from the germs of diphtheria in so far as could be decided by the ordinary culture methods, yet in many cases there has been a reappearance of the germs in the throats of those patients coincident with catching cold Obviously the mucous discharges have washed from the crypts of the membranes living bacilli which had been beyond our reach in efforts to detect their presence The period of quarantine of diphtheria, in localities not possessing advantages of laboratory aid, is usually thirty days It is of incidental interest to note that the average quarantine period for 5,000 cases taken at random from our case book, all of which had been released on bacteriologic indications, was twenty eight days It should be remarked, however, that such averages are also unsafe guides, as among the 5,000 cases tabulated several were in quarantine for from two to three months and a number for only about a week

Dr G T Schwartz, Providence, R I I doubt if we can get at any common agreement until many of the old traditions of ignorant health officers are wiped away Until we discard the old idea that long confinement of a case of contagious disease is necessary simply because the disease has lived in the same house with a certain family, we shall still have trouble The inconvenience is still shown in local boards of health the medical state officer of one town will quarantine a certain case for seven weeks, the neighboring town for three weeks Both receive censure It is a question of common sense, whether we are doing what we actually know we ought to do

Dr B Franklin Royer Harrisburg Pa I want to confirm everything that Dr Abbott has said with reference to the experience, at least while I was in charge, of the Municipal Hospital in Philadelphia concerning duration of quarantine in diphtheria While the average quarantine in that hospital is possibly a little longer than we meet in private practice, it might not be amiss to mention that that average duration of quarantine perhaps included all chronic cases that is, cases with continued irritation of the nasal or buccal mucous membrane or with discharging ears If the average were taken with that group of cases eliminated (many of them remain six and eight weeks or longer), the average time would be reduced to about twenty one days In Pennsylvania we have a minimum limit, which has been fixed by statute, of twenty one days, except in instances in which two negative cultures have been received on successive days when the time may be as short as fourteen days Our request for disinfection from the attending physician is framed so as to make him certify that nasal and oral discharges have ceased. In this way it gives a long quarantine for a group of cases that seem to require it, and releases the average case (except in municipalities that may have some additional requirement) at the end of the twenty one day period

The need for uniformity in quarantine regulations has been felt very keenly in Pennsylvania, and with the adoption of the revised act in 1909, certain minimum regulations were fixed for the entire state There are 875 separate boards of health in the cities, boroughs and first class townships in this commonwealth and the State Department of Health has direct administrative public health control over about 2,160,000 people scattered through 1,350 second class townships, and advisory and supervisory control over the remainder of the state In order to secure uniformity, the very thing that Dr Kerr is arguing for this morning, a minimum standard, was fixed by the act of 1909, that minimum standard is required of all municipalities in the state, each community, entitled to a board of health, however, being allowed to go as much beyond that minimum requirement as they deem wise It is very annoying to the state health officer to find a specific regulation in a certain community, and just across an imaginary line, the boundary of that municipality, an entirely different regulation It is not creditable to public health workers or to the practice of medicine to find these wide variations As worked out in Pennsylvania by the State Department of Health this standardizing of regulations is improving conditions a great deal, and is giving much greater satisfaction to the public

Mr W A Howe, Albany, N Y It is my privilege to be associated with about 1,400 or 1,500 health officers in the state of New York With them there is no one thing which so frequently occasions trouble and embarrassment in the proper administration of the duties of their office as the establishment and maintenance of proper quarantine over children's diseases This universal lack of regularity or uniformity of quarantine methods seems to me to be one of the most serious defects of our present system In my mind we should not only endeavor to adopt a universal state method of quarantining each quarantinable disease, but an interstate system, whereby one state would exert quarantine over the various communicable diseases in precisely the same manner as do the other states I can see no reason why the quarantine of small pox, diphtheria or measles should be different in one state from that in another, and I can appreciate many reasons why a uniform period of quarantine and a standard quarantine card should be put in operation in every state Were the State Department of Health to adopt a uniform quarantine card and furnish the same to the various health officers, who in turn should place such cards on the various communicable diseases reported to them much of the burden of responsibility would be lifted from the local health officer and his results greatly enhanced

Dr. William F Snow, Sacramento, Cal In California, we felt that we must do something, regardless of what the rest of the country was doing, to put our administration cases on some sort of common sense basis Nearly a year ago the State Board of Health appointed a committee of fifteen, which is termed the Committee on Standard Methods of Public Health Administration, and all winter long we have been meeting every little while, we have decided, as a common sense proposition, to report to the State Board of Health for adoption in our form of rules and regulations next fall a number of things which are very far afield from the type of administrative procedure which we have been accustomed to carry out throughout the country One simple measure which we proposed to relieve the local health officer from responsibility has been to make certain simple regulations with reference to two negative cultures in diphtheria, when that does not work, the local health officer shall report that case and all other cases that do not fall within the le *Exposed Persons*—Quarantine of
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2 Am Jour Pub Health, 1912 ii, 121.

and do not consider the public point of view We miss a great many cases that are hidden by the public What states report contagious diseases with any degree of accuracy? Very few of them So the reports that you read about the number of cases of measles, of diphtheria, scarlet fever are rarely any indication of the number that actually exists If we can get at the question from the point of view of the public, enlist its interest in our efforts, and then by a process of education point out to it what ought to be done, I think we shall have accomplished a great good The public is willing, if we will only try to help it, but we have in the past put ourselves in the attitude of policemen in dealing with them, and the result is that we have had opposition To illustrate what happens A student made a sanitary survey of Berkeley In the manufacturing district, where everyone knew there were a great many cases of measles, mumps and chicken pox and a few cases of scarlet fever, the map showed a very small number, but when he came to trace the deaths from these diseases many were in that district In the intellectual part of the city he found a large number of cases reported, but a small number of deaths, that showed that where there was unintelligent opposition health office records did not show the facts We should approach this problem from an educational point of view

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PLEURAL VOMICÆ

WITH AN ANALYSIS OF SIXTEEN CASES*

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ST LOUIS

If left to Nature the destiny of pus within the pleural sac would be first, absorption, second, formation of a pleural vomica, third, perforation of the chest-wall, resulting in empyema necessitatis, and fourth, perforation through the diaphragm into some of the abdominal organs or the peritoneal cavity Of these several results, all quite rare, that by way of formation of pleural vomica is probably the most frequent

Dieulafoy,[1] in the 1911 edition of his work on practice, says

> Considering only its etymology, the word "vomica" (from *vomere*, to vomit) is improperly applied to the symptom which we are about to describe Custom, however, has consecrated it and the word "vomica" serves to describe ejection of pus by respiratory channels just as hemoptysis denotes the ejection of blood from the same passages Custom has even gone further and by an abuse of language has finally included under one term the symptom and the lesion, so we speak of pulmonary, pleural and hepatic vomicæ, that is to say, a purulent collection in the lung, pleura or liver, which has burst into the bronchi and has been coughed up

Dieulafoy's work, moreover, is the only one of the standard text-books consulted which devotes any appreciable space to the subject, and even such special works on diseases of the respiratory tract as those by West[2] and Lindsay[3] give little attention to the condition, the former covering it in two pages, while the latter merely mentions it And so it has seemed that it might be both timely and profitable to direct attention more closely to this class of cases that must appear important because often difficult of recognition, though at times simulating closely other conditions some of which may be incurable, and when thus wrongly appreciated may be the cause of not only great and prolonged suffering to the poor victim of this distressing malady but even of a fatal termination

The present series comprises sixteen cases, ten of which were seen in private practice, of the remaining six cases five occurred in the services of the staff of the St Louis Mullanphy Hospital, and one in the practice of a colleague The reading of the histories of all these cases would trespass on more than the allotted time, and therefore a brief account of Case 14 will alone be presented, as with its symptoms, physical signs and x-ray findings it may well be taken as the type of the group of cases to be studied.

Case 14 —The patient, A L., aged 35, American, married, housewife first seen Nov 14 1911, had never been strong, she had had appendicitis five years ago, and several attacks since. Oct 12, 1911, the patient was operated on in one of her mild attacks of appendicitis One week later pneumonia of the left side developed and a few days later pneumonia of the right side with pleurisy of the left side There was pneumonic sputum About November 2 the sputum suddenly became offensive and copious, filling a sputum-cup in a short while The cough then became most distressing and exhausting November 14, physical examination showed an area of localized flatness below the angle of the left scapula extending to the base below and from 1 inch to the left of the spinal column to the posterior axillary line, over which breath sounds and tactile fremitus were absent Just inside the angle of the right scapula, signs were present pointing to the formation of a cavity in the right lung (Fig 2) A skiagram showed a distinct shadow in the left infrascapular region, the location of the pleural vomicæ In the sputum streptococci were found, but no tubercle bacilli

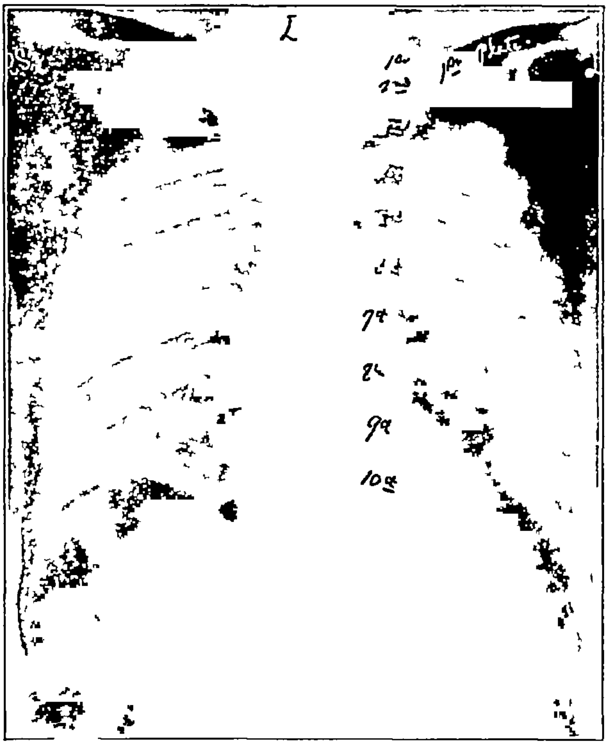

Fig 1 —Case 14 Showing uniform shadow of localized purulent collection in left pleural sac posteriorly below level of sixth rib

Nov 16, 1911, the patient was etherized, the ninth rib resected, and entrance made into a cavity in the left pleura about 6 by 4 inches in dimension, liberating a large quantity of very offensive pus, of the same odor as in bad appendix cases and as of the patient's sputum (Fig 3) The operation was well borne and gave prompt relief from expectoration of offensive pus The patient's condition was satisfactory until December 10, when cough and expectoration appeared to increase and fever returned, in fact, cough and expectoration had never become so completely controlled after operation as in the other cases A second examination of the patient confirmed the finding of a cavity in the lung at about the eighth interspace, just within the perpendicular, going through the angle of the right scapula and about the size of the chest piece of a Bowles stethoscope. Distinct cavernous breathing, pectoriloquy and consonant bubbling râles were heard, limited absolutely to this area, indicating a cavity at this point as the probable cause of the persistence in the symptoms A skiagram showed the shadow of the wall of the cavity with the clear central area

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* Read in the Section on Practice of Medicine of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

1 Dieulafoy Text Book of Medicine i 367 (15th Ed)
2 West Diseases of the Respiratory Organs ii 704
3 Lindsay Diseases of the Lungs Ed 2 p 160

Dec 15, 1911, under general anesthesia resection of the eighth rib was made at a point midway between the spine and the perpendicular through the angle of the scapula, and a cavity was entered (Fig 4) Only a few drops of pus were obtained, but, whether or not as the result of compression of the cavity consequent on partial pneumothorax created by the operation, the patient steadily convalesced and is perfectly well to-day, and physical signs of a cavity are no longer present

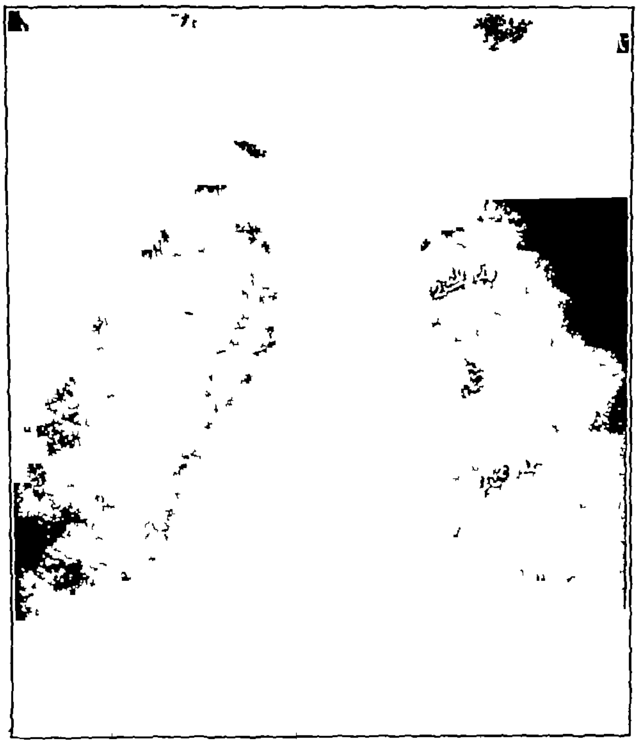

Fig 2—Showing tuberculous pulmonary cavity in right lung with the circular shadow of its walls and its clear central area.

An analysis of the sixteen cases from the following points of view develops some facts of interest and value

Sex—Thirteen males, three females

Age—First decade, one, second decade, three, third decade, three, fourth decade, five, fifth decade, three, sixth decade, one

Occupation—Business men five, farmers, three laborers three, professional men, one, housewives, two, not stated, two

Etiology—Four cases developed during the course of pneumonia one in appendicitis one in an infection from mouth, two in chronic bronchitis with bronchiectasis, three in empyema, three in abscess of liver, four sources, therefore, were below the diaphragm

Bacteriology—In none of the sixteen cases were tubercle bacilli present Case 1 had streptococci and staphylococci and colon bacilli in sputum, Case 12 *Staphylococcus albus* in sputum, Case 14 pneumococci and streptococci in sputum and in pus from the left pleura

Symptoms—Fever of a more or less septic type was present in twelve, absent in two, not stated in two More or less profuse expectoration of pus in every case constituted a most characteristic, distressing and exhausting symptom and caused the statement by the patients in Cases 1, 2, 3, 6, 7 and 9 that this symptom could not have been borne more than a few hours longer if not relieved Onset of sputum was sudden in seven, not sudden in two, not stated in seven In Case 12 a sudden gush of pus was nearly fatal through suffocation and shock In none of the sixteen cases were elastic fibers found in the sputum A marked loss of weight and strength occurred in practically all the cases

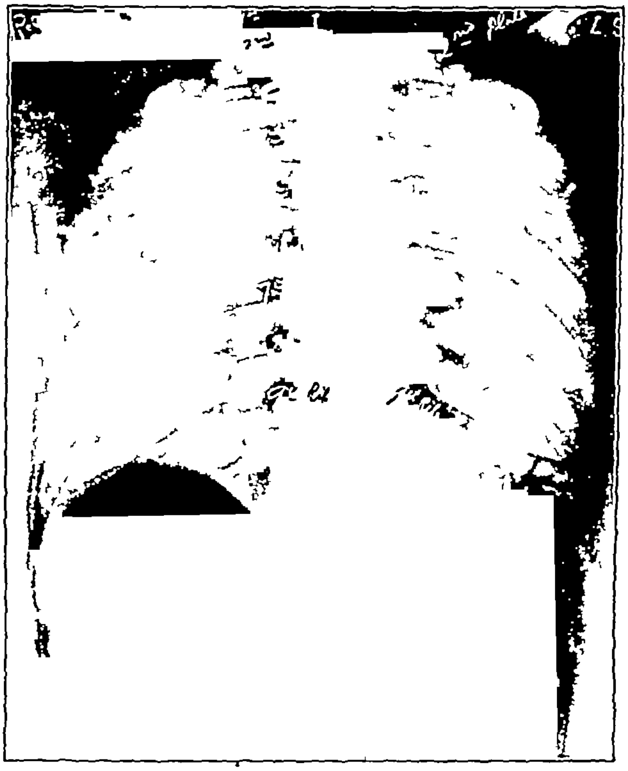

Fig 3—Case 14 Showing resection of left ninth rib with drainage tube in localized empyema cavity

Physical Signs—The important signs of fluid in the pleura, as flatness, and absent or diminished tactile fremitus and breath-sounds, were present over a localized area in the chest in ten of the cases That of pyopneumothorax was present in only two In Case 5, that of a child of 7 years with loud bronchial breathing over the entire involved left side, the muffled heart sounds on the left and accentuated sounds of this organ in its displaced position to the right were helpful diagnostic points, a phenomenon also present to a less degree in Case 6 That signs of pneumothorax were present in only two cases conforms to the dictum that in a great majority of cases of pleural vomicæ pneumothorax does not develop either because of the so-called valvular character of the opening or, as suggested by Osler, that in many of these cases there is no definite opening but a necrosis of pulmonary pleura and a seepage through the spongy tissue of the lung.

Character of Fluid.—This was offensive in six, resembled that of amebic hepatic pus in one, and was simply purulent in the remainder.

Location of Fluid.—Right side in seven, left in four, not stated in five. Of the above pleural collections ten were located in the lower and posterior part of the sac.

Leukocytes.—Slight leukocytosis in two cases, moderate in two, not stated in twelve.

Diagnosis.—The important points in the diagnosis were: (1) the history of an etiologic source for pus, as pleurisy, pneumonia, appendicitis, hepatic abscess, etc.; (2) septic fever, sudden, profuse and constant expectoration of pus, generally offensive and in large quantities; (3) most important of all, the localization of an area in the chest giving the classical physical signs of fluid in the pleura. On these findings had also to be based the differential diagnosis between pleural vomicæ and delayed pneumonic resolution, pulmonary tuberculosis, bronchiectasis, abscess of lung, pulmonary gangrene and the more rare conditions of new growth, lues, hydatid, mediastinal tumor, dermoid cyst, etc. From bronchiectasis, with which, as in Case 3 of this series, it is most apt to be confounded, pleural vomicæ were distinguished by the consideration that in bronchiectasis there is generally history of long-continued chronic bronchitis, gradual onset of characteristic sputum, presence of cavity signs, as cavernous or amphoric breathing and cracked-pot or amphoric percussion note alternated with signs of fluid when the cavity is full, while with pleural vomicæ the signs of pleuritic fluid remain fairly constant because the cavity generally contains only fluid and no air. The same distinction holds true also for abscess of the lung, in which condition elastic fibers may also be present in the sputum. The skiagram, moreover, gives a definite shadow over the site of the pleural vomica, while over the cavity in the lung we have the rather circular shadow of the cavity wall with the clear area in the center, the cavity being not too full.

As bearing on the incidence of empyema and pleural vomicæ, my assistants, Drs. Atwood and Judge, have collected some statistics covering a period of three and a half years at our large General City Hospital at St. Louis and a period of eight years at our St. Louis Mullanphy Hospital. At the City Hospital there were during this period 35,900 admissions, with eighty-seven cases of empyema, or 0.24 per cent. Among the eighty-seven empyema cases there were only three cases of pleural vomicæ, or 3.4 per cent. At Mullanphy Hospital the admissions were 9,782, with twenty-eight cases of empyema, or 0.28 per cent., and among these empyema cases there were three of pleural vomicæ, or 10.7 per cent.

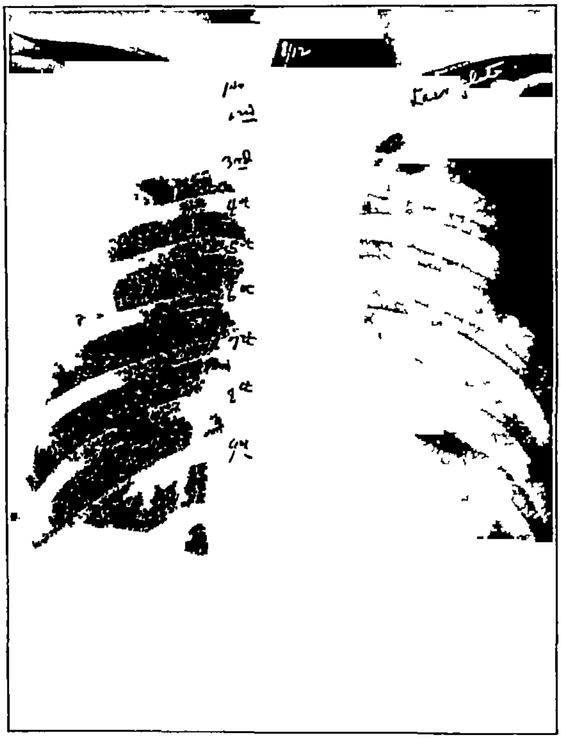

Fig. 4.—Case 14. Showing resection of right eighth rib for drainage of small underlying pulmonary abscess. Note complete clearing up of shadow on left side of chest.

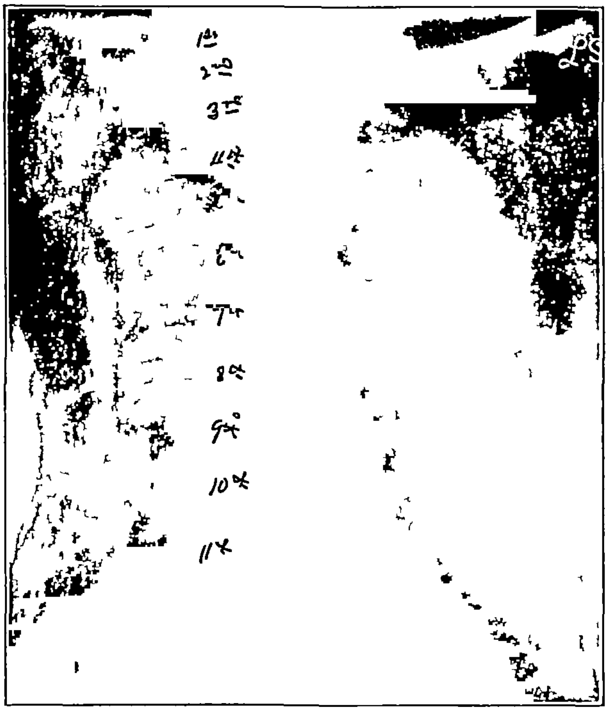

Fig. 5.—Case 13. End result of an extensive thoracic resection for obliteration of a right sided pleural vomica of many years standing. Showing deformity resulting in a case depending too long on Nature for a cure.

Lord[4] found only five cases of pleural vomicæ in 145 cases of empyema, which gives 3.4, the same percentage as at our City Hospital, while James[5] of Edinburgh in his recent work on pleurisy, found nineteen cases of pleural vomicæ in forty-three empyemas, or 44.18 per cent. May not these low percentages of ours, compared to the much higher ones of James, who has given a great deal of study to the subject, mean that perhaps we have overlooked many of these cases and probably classified them with such incurable conditions as inoperable bronchiectasis, abscess of lung, etc.? Lord says that it is a complication frequently overlooked.

In our series of cases:

Four had been considered as delayed pneumonic resolution.
Two had been considered as typhoid fever.

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[4] Osler: Modern Medicine, iii, 836.
[5] James, Alexander: Pleurisy, p. 139.

Two had been considered as bronchiectasis
One had been considered as pneumonia
One had been considered as pleurisy
One had been considered as abscess of the lung
One had been considered as malignant disease of the lung

In Cases 2 and 4 correct diagnosis had been abandoned because pus had not been found with the aspirator In Case 3 pleural vomica had been overlooked because of the complicating presence of bronchiectasis Case 9 began as a septic pulmonary infarct following cauterization of epithelioma of the floor of the mouth, and for a time was taken to be malignant metastasis to the lung, because of etiology, hemorrhagic sputum, etc In Case 14 pleural vomicæ had also been overlooked because of the complicating presence of pulmonary abscess

If all of these cases could only be appreciated before the onset of pleural vomicæ! This is frequently a difficult task because the empyema is generally quite localized and often interlobar It is at this stage that the skiagram is of great assistance in the localization, and in the very obscure conditions, especially interlobar collections, use of the aspirator under the guidance of the fluoroscope, as suggested by Engelbach[6] and Carman, should be a great help The progress of the majority of the cases in the present series appeared to be toward a fatal termination until relieved by operation The most important complications in unrelieved cases were septicemia, exhaustion, multiple pulmonary abscesses, bronchiectasis, myocardial degeneration, etc

Mortality—While the earlier writers considered pleural vomica a favorable curative occurrence, Saussier,[7] nevertheless, reports fourteen deaths in twenty-eight cases without operation, or a mortality of 48 27 per cent, and Frank Donaldson[8] says it is a serious condition and that if pulmonary fistula persists it will wear out the patient

In our series of sixteen cases the fatalities were three, or 18 71 per cent namely, Cases 4, 6 and 13 In the ten cases in private practice there was one death, or a 10 per cent mortality In Case 4, as post-mortem showed, death was due to pulmonary abscesses and bronchiectatic cavities and also pulmonary gangrene, all of which probably resulted from the persistence of symptoms for twenty-one months before relief by operation In Case 6, while the patient was ill only two months, he undoubtedly suddenly succumbed to myocardial degeneration after apparently having been greatly relieved by the operation In Case 9 death was due to shock following an extensive thoracic resection for obliteration of a long-standing empyema cavity

Treatment—A few points suggested by this series deserve mention The ten patients in private practice were all operated on under ether and all stood the anesthetic well although their condition when placed on the operating-table was bad, and in Cases 1, 2, 6 and 14, especially, the general resistance had been reduced to an alarming degree The only patient operated on under local anesthesia died on the third day from a sudden heart-failure, though the quantity of cocain used was too small to be a factor in the fatal result When the diagnosis of a localized empyema appears quite certain, failure to obtain pus with the aspirator should not deter the surgeon from entering the focus, for in a certain proportion of cases the pus is too thick and viscid to be obtained by the aspirator, as was experienced in Cases 2 and 4, and with precautionary measures against pneumothorax, as by use of Quinby's tracheal insufflator apparatus, invasion of the pleural cavity would be safe

The relief through operation from the distressing, harassing and exhausting cough was in every case nothing short of magical, for in not one, at least of nine of the private cases, was any of the purulent and offensive pus raised through the mouth after drainage had been established through the chest-wall

As to the completeness and permanency of the cures Patient 1, operated on in 1902, and Patient 2, in 1903, are both absolutely well to-day, with entire reinflation of lungs, the former weighing 70 pounds and the latter 40 pounds more than at dates of operation The other recoveries, dating from 1904 to 1911, are also complete, in spite of the fact that the duration of illness before operation was as follows one month in two cases, two months in three, three months in one, seven months in one, one year in three, not stated in six

In conclusion, I simply wish to emphasize that pleural vomicæ cases form a class deserving far more attention than to date accorded it in the literature Many a poor victim of this generally curable malady is doomed to an untimely grave because he is believed to be suffering from such hopeless affections as advanced pulmonary tuberculosis, inoperable bronchiectasis, pulmonary abscess or some of the more rare and fatal types of diseases of the respiratory tract If the localized empyema is diagnosed before perforation, or if every case of copious purulent expectoration be carefully studied and correctly appreciated much untold misery and suffering may be averted and many lives saved

4502 Maryland Avenue

ABSTRACT OF DISCUSSION

Dr Theodore C Janeway, New York These cases should be recognized more frequently and adequately treated by methods employed in cases of empyema Recently I had a case which showed what difficulties may be encountered in making a diagnosis, because of the presence of tubercle bacilli in the sputum This patient, a physician, had had an abdominal operation for supposed appendicitis with abscess formation, an abscess was opened and drainage was instituted, but it was not satisfactory He improved for a few days, then became septic again and a second incision was made for drainage in the flank below without relief After a few days he developed harassing cough and soon coughed up pus in large quantities The condition ran along through the winter, the patient developed clubbed fingers and a slight osteo arthropathy He then came to New York, and signs of a pleural effusion were found with a mass below the diaphragm resembling kidney The sputum was loaded with tubercle bacilli, but nothing was found of a tuberculous nature in the lung by *x* ray or physical examination The history in this case was absolutely distinctive and I believe that the history alone enables a diagnosis to be made A careful study was made The pus that was squeezed from the opening in the flank also revealed the presence of large numbers of tubercle bacilli I believed that a tuberculous kidney, then a tuberculous perinephritic abscess, then rupture upward of this accounted for the apparent pleural abscess The patient went to the Mayo brothers for operation and I have not heard the result Even if tubercle bacilli are present in such cases I should therefore examine with great care before deciding that there is pulmonary tuberculosis present if the history is distinctive of the condition under discussion

Dr. Samuel Robinson, Boston I have reported about seventy five cases of empyema, of these twenty five resulted from some infectious conditions within the lung, and I have come to the conclusion that these so called pleural affections which are localized are generally secondary I believe that the cases decribed are almost invariably the result of some pulmonary infection, in my opinion, these infections occur first in the lungs Occasionally an abscess forms at the periphery of the lung and there is formed a localized accumulation of pus When certain cases of empyema appear they are not primary cases of empyema, but the result of abscesses occurring at the periphery which have burst into the pleural space because it was not walled off

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[6] Engelbach X Ray Studies of Serofibrinous Pleuritis Am Jour Med Sc December 1911

[7] Pepper System of Medicine, iii, 543

[8] Pepper System of Medicine

This class of cases is the most difficult that the surgeon has to deal with, because of the pulmonary involvement. When the surgeon operates, he does so on the empyema cavity and not on the lung cavity which is so deeply situated We know the results that have followed operations on empyemas, secondary and subdiaphragmatic abscesses which have followed cases of appendicitis, duodenal ulcer and other abdominal conditions I think that the first infection in these cases is a pulmonary infection, for the reason that the lung tissue becomes adherent to the diaphragm and because of the expectoration of so much pus It appears that a pulmonary abscess has burst into a bronchus

Dr. Arthur A. Gillette, Rome, N Y I should like to make a report, from the general practitioner's standpoint, of a distinctive case that occurred in a young woman There was difficulty in making an early diagnosis, but the abdominal symptoms were marked They seemed to be referred well up and to the left side of the pelvis especially, and were without any apparent cause The patient gave a history of an acute infection which took place during the grippal season and which pointed to some serious abdominal disease Subsequently there was discharged by mouth large quantities of foul smelling pus which was loaded with streptococci With a hypodermic syringe there was withdrawn from the chest some very offensive pus which was loaded with streptococci I am convinced that this was one of the cases with which we are now dealing The patient recovered without surgical aid, the young woman is now in apparently perfect health and is very active My difficulty lay in determining the point where the infective process was likely to become localized In attempting to locate this point, the general practitioner must be constantly on the watch and must use every facility available and examine every organ In cases in which operation for appendicitis has been advised, I have seen the development three or four days later of a distinct pleural or pulmonary process In my experience I have often found that the symptoms referable to one side result from diseased conditions on the same side especially when associated with abdominal symptoms In the instance I have just reported the local process was on the left side of the chest and back, and the abdominal symptoms were distinctly in the region of the left ovary

Dr. Elsworth Smith, St Louis The case cited by Dr Janeway is one of great interest Dr Robinson holds that all pleural vomicæ are due primarily to a focus in the lung, as he believes that it would be impossible for an empyema to perforate the greatly thickened visceral layer of the pleura While he may be right in many cases, still in a large proportion the pus does actually perforate from the pleural cavity into the lung, and after all it should not be any more impossible for this to occur than for what happens in empyema necessitatis, for instance, in which it is of course conceded that the pus within the pleural sac does perforate the parietal layer of the pleura, even though greatly thickened From the point of view of this paper, moreover, the recognition of the presence of pus within the pleural sac communicating with a bronchus and being expectorated is, of course, far more important than the question whether the primary source of this pus be pleural or pulmonary Therefore, from this point of view it might be well to modify the definition of pleural vomicæ to be a collection of pus within the pleura communicating through a bronchus and being expectorated, with this definition the primary source of pus might be pulmonary, pleural or in the abdominal cavity

PROGNATHISM, WITH OPERATIVE TREATMENT *

WILLIAM M. HARSHA, M.D
CHICAGO

In the consideration of this subject I wish to distinguish between racial prognathism and pathologic types as illustrated by the case reported Evolution is presumed to have been from the prognathous or forward-jawed type to the orthognathous or straight face Mongolian or Caucasian type The contraction from the prognathous jaws to the orthognathous has been a factor in the production of the irregularities of dentition so common in the higher races Figure 1, shown through the courtesy of Professor Starr, represents a Taruscan Indian girl (Mexico) illustrating a racial type With the occurrence of the recession of both jaws the teeth are crowded together

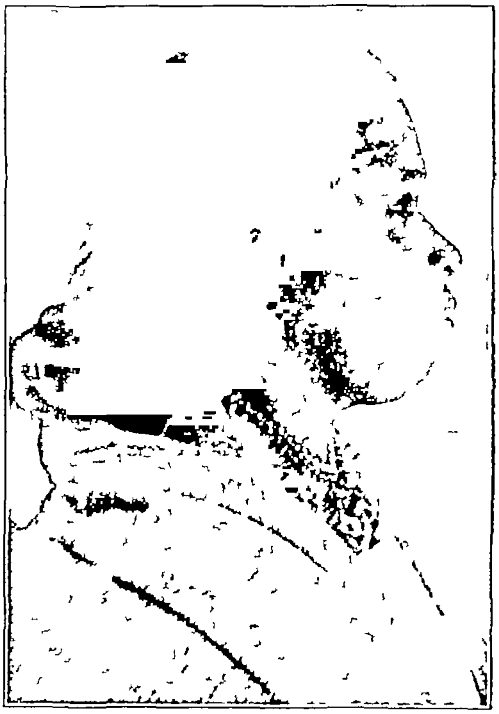

Fig 1—Taruscan Indian girl showing (racial) prognathism (Copyright by Frederick Starr)

In the case of prognathism which is the subject of this report, only the lower jaw projects and therefore the occlusion of the teeth is very imperfect (Figs 2 and 3) The incisal edges of the upper central incisors were five-eighths of an inch posterior to the incisal edge of the lower central incisors on one side and three quarters of an inch on the other There was also an overdevelopment of the mental portion of the mandible, and almost complete absence of the angle between the body and the ramus of the jaw All the lower teeth were inclined sharply toward the tongue Dental and labial sounds were inhibited There was a marked thickening of the lower lip, and a depression of the upper, with depressed alæ nas

This pathologic prognathism stands in sharp contrast to the racial type because of the malocclusion faults of alignment and overdevelopment of the mental process The occlusion and alignment of teeth in the types of race prognathism are normal, even better than the average in the higher races (Fig 4)

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* Read in the Se[illegible] of the [illegible]dical Association at [illegible] City June 10

ETIOLOGY AND EMBRYOLOGY

Nothing valid can be suggested as to the method of production of this deformity, except error or defect in development The mandible develops from the first branchial arch, which has previously divided into a lower mandibular and an upper maxillary process In this mandibular process appears what is known as Meckel s cartilage, which is straight and rod-like, extending from the periotic capsule or site of the internal ear, to the distal part of the mandibular process

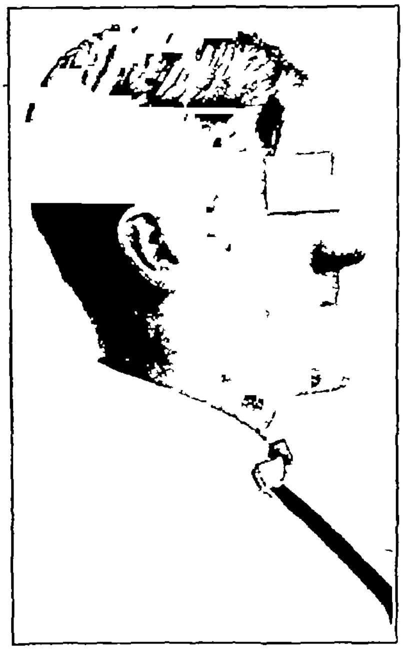

Fig 2 —Case of pathologic prognathism protrusion of lower jaw

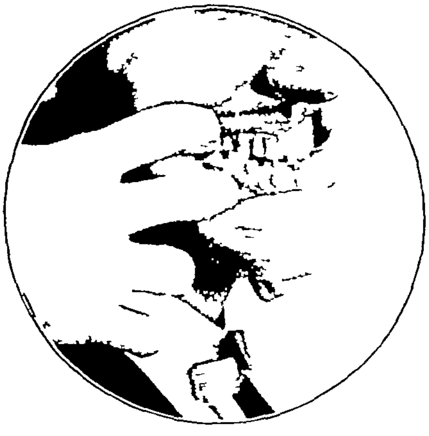

Fig 3 —Pathologic type showing faulty alignment and malocclusion

The absence of a proper angle in the case which I report suggests this defective development. The absence of the third molars which never erupted is further evidence that it is not a reversion of type, as in racial types the full number of teeth is found, and Bertillon and Fontan have even observed an extra (fourth) molar in one of the New Caledonian races

The diagnosis will require only the exclusion of an old forward dislocation of the lower jaw, with restored motion This differentiation can be done by physical examination and verified by *x*-ray

Indications for operation are

1 Inability to secure through orthodontic measures a sufficient occlusion of the teeth

2 Marked deformity because of overdevelopment of the mental portion of the mandible with malocclusion

3 Development of the mandible in a straight course, and consequent absence of a proper angle of the body of the jaw with the ramus, preventing proper occlusion.

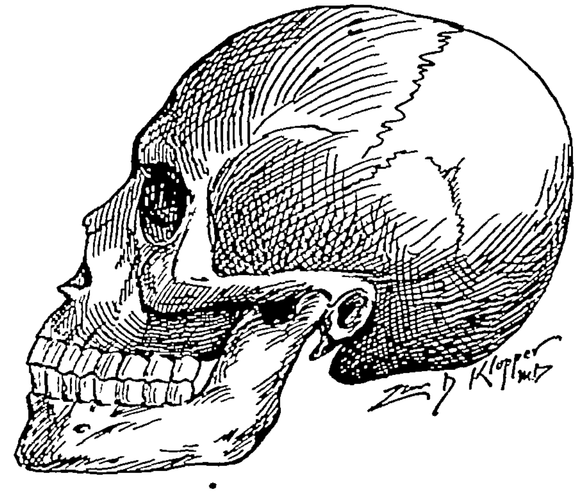

Fig 4 —Occlusion and alignment of the teeth in racial type

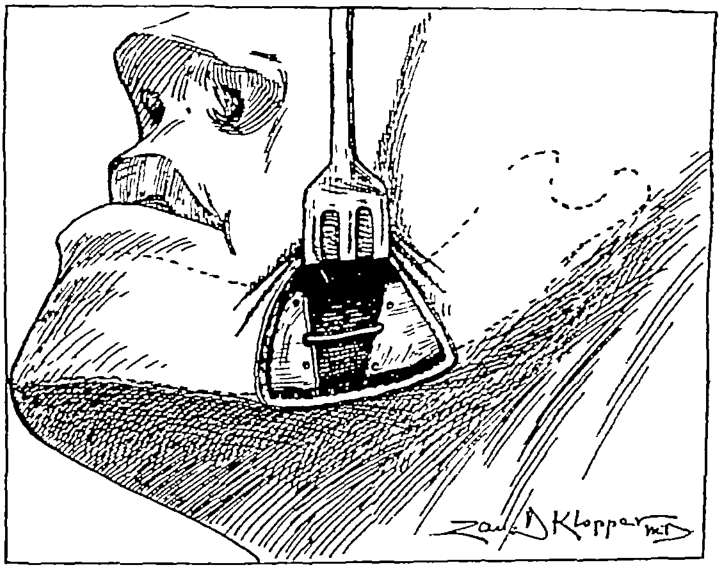

Fig 5 —Space after removal of a section to permit proper articulation.

TREATMENT

Much can be done to prevent the deformity by orthodontic measures during the early years in the way of correcting the occlusion and alignment After maturity the same means may aid in restoring alignment of the teeth and correcting the arches preliminary to operation

The first surgical treatment of which I find record is that of Hullihen of Wheeling, W Va, in 1848[1] Dr E P Blair of St Louis, on the recommendation of

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[1] Babcock Items of Interest, xxxii 442.

Dr Angle of that city did resection between the second bicuspid and first molar in 1897 Infection delayed healing Later operations of this kind were done with the reported loss of the jaw in one case W W Babcock of Philadelphia has in later years done several operations, resecting a portion of the ramus of the jaw with successful results Dr Max Ballin of Detroit, in 1907, did a double resection between the cuspids and molars with good results, secured by extra-oral operation

The operation here reported was done with a view to secure occlusion, to correct the angle and to effect the best cosmetic result Because of the length of the mandible and the absence of the last molars, there was room at the site of the angle for resection This site for the operation seems best adapted for restoration of the proper angle which in most of these cases is lacking Estimation of the size and shape of the fragment was made from the *x*-ray plate, and models kindly made for me by Dr Joseph Eisenstaedt

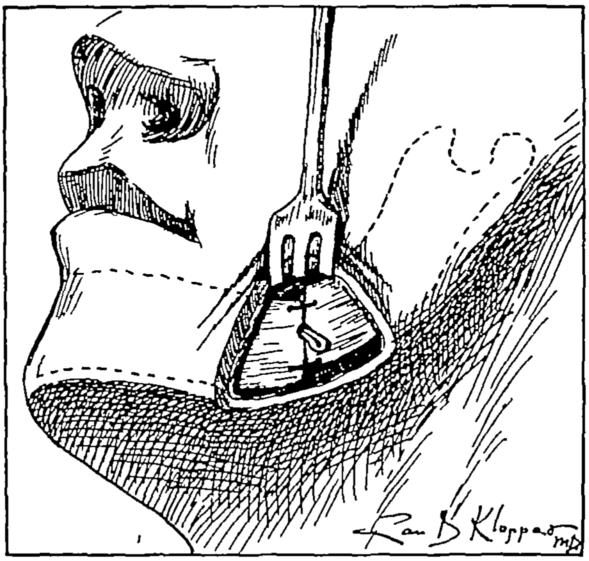
Fig 6 —Fragments wired.

REPORT OF OPERATION

Operation—Five eighths inch on one side and three-fourths inch on the other were resected through a 2 inch incision along the lower border of the jaw on each side (Fig 5) This was easily done with bone cutting forceps When the inferior dental nerve was reached, it was held out of the way by a ligature, while the upper portion was cut away The fragment was rhomboid in shape with the base above The ends of bone were fastened together, each with two wires (Fig 6) Slight mobility was permitted so that the ends might be moved upward or downward, as required, to adjust the upper and lower teeth, which were wired together by Dr Eisenstaedt by the method of Dr T L Gilmer The wound healed by primary union Before bony union had taken place, the patient was called home because of serious illness in his family and further supervision was impossible The slight immobility planned for advantage proved to be a disadvantage when the patient was out of reach The wire splints were removed before union was complete, with the result that the distal fragments were displaced upward, and it was necessary to have two molars extracted

Result—In a communication the patient says he can now talk and masticate well and that his appearance is greatly improved (Fig 7) He admits that a better result could have been secured if he had remained under treatment a sufficient time

ADVANTAGES

The advantage of extra-oral operation is obvious The selection of the site posterior to the molars is the best for correction of the angle which is desirable in almost all cases, while at this point submucous resection is easier than either anterior or posterior resection In case there is lack of room back of the teeth the last molar can be extracted and time allowed for healing over before operation, so as to make submucous resection possible

I wish to acknowledge my obligation to Dr Joseph Eisenstaedt for his valuable aid in the case along dental lines

31 North State Street

ABSTRACT OF DISCUSSION

Dr E S Talbot, Chicago I should say that this condition was an atavism of the lower jaw which returned to the original type because of an unstable nervous system of the father and mother These conditions are not uncommon when one side of the jaw is longer than the other The appearance of this picture leads me to believe that this was a very unstable individual, as far as the nervous system was concerned I can say very little about the operation because I have never performed it in this way Dr Harsha has performed it successfully to all appearances, and perhaps a little differently from the technic which Dr Babcock presented to our Section a year or two ago This will go down no doubt in history as one of the first cases in which the operation was performed in this location.

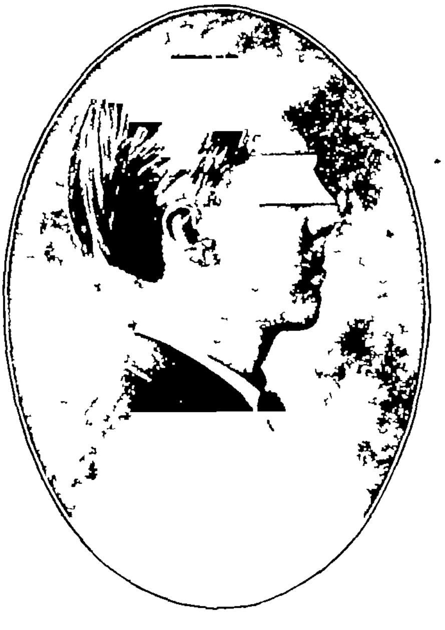
Fig 7 —Profile of patient after recovery

Dr. W Wayne Babcock, Philadelphia One of the great handicaps in operations of this type is the fact that the upper jaw is badly developed If one could develop the upper jaw properly, the need for extensive resection of the lower jaw would not be so great The tendency in many cases is to injure the patient's appearance by operation Some operations take from the individual the firmness of character of the rather large lower jaw There are difficulties in enlarging the upper jaw, but, of course, a great deal could be done for the patients if they went to a capable orthodontist early in life It remains, however, after a certain degree of fixation has occurred, for the surgeon or dentist to get, not a perfect result, but [illegible] that w[illegible] the [illegible] and the powers [illegible] the body of t[illegible] case worked very well The difficulty, of course, in attacking the body of the jaw, is that we interfere with the teeth, and if the teeth are extracted and the jaw at once resected, the compound fracture into the mouth adds much to the danger of later sepsis A suggested improvement is to remove one or two teeth and then, after healing occurs to do a submucous resection of the jaw from the under side One need not fear to resect or to destroy the inferior dental nerve The nerve rapidly regenerates, the teeth maintain their function and nutrition and the tissues their vascularity, unless infection spreads through the jaw, when necrosis is followed by menace to the teeth, as well as to the entire bony structure.

After the report of a somewhat similar case before this Section some years ago I had occasion to use a steel splint instead of wiring, and I was impressed by its value I have applied Lane plates after resection or division of the jaw, and in one instance I screwed an angular ramus made of steel to the body of the jaw below the angle so as to form a false ramus and joint This worked very well, but a rough projection at the angle finally worked through the overlying skin The steel was not expelled and the patient wore this artificial ramus of steel with a point protruding for about four months without any inconvenience except a slight discharge from the perforation Of course, during the healing process it is wise to have an additional support

Dr. Thomas L Gilmer, Chicago There is certainly little known about the etiology of prognathism of the mandible, but it is known that inheritance has much to do with it, I know many children with prognathism of the lower jaw which can be traced to heredity The operation is worth while for cosmetic purposes, if for no other, and, as Dr Babcock has said, it is not impossible that the results cosmetically may be worse than the deformity, but it does not seem to me that this should often be the case

The pictures exhibited by Dr Harsha do not show that the mandible is much too long, but rather that the maxilla is too short It may have lengthened somewhat on account of the occlusion of the teeth

I do not think that it makes very much difference whether the nerve in the mandible is severed I have done many operations for removal of the inferior dental nerve, also of the second branch, in cases of tic douloureux, and I have never seen a dead pulp in a tooth as a result I hope that some time it will be known what changes if any occur in the pulps of teeth after resection of the nerve Dr Babcock spoke of the advisability of cutting the bone at the angle If the operation is done in this locality there is less danger of entering the oral cavity, since the thickness of soft tissues overlying the bone in the mouth is greater here than further forward

I have used the Lane plates in fractures of the mandible, but if we can get along without drilling into the bone we lessen the possibility of bone and other infection By wiring the lower to the upper teeth we use the upper teeth as a splint which holds the parts rigidly The only objection to this method is the fixed closure of the jaw Any technic is good which in the experience of the operator succeeds

Dr. G V I Brown, Milwaukee, Wis This Section has had the opportunity to consider two methods which represent the newest and best surgical procedures for resection of the mandible for the purpose of improving tooth occlusion and facial conditions Some of us at least have felt rather strongly about the unfortunate publicity that has been given the earlier attempts to perform the operation to which Dr Harsha referred, in the course of which at least several important surgical principles were needlessly violated Dr Babcock's method as he explained it to us, and as since published, judged from a surgical standpoint appears to be perfect for resection at the particular point he selected, this also may be said of Dr Harsha's method The point which Dr Babcock raised, which was emphasized by Dr Gilmer, is really the vital question In some conditions such an operation may be called for, but they seldom occur Most of the patients whose jaws present the picture exhibited by Dr Harsha are persons who are being deprived of some very vital necessities, and it is vastly more important that these people be given general relief through better respiration, by spreading the upper arch in addition to facial improvement, than that we improve their appearance alone by the reduction of the lower jaw If one examines the palates in such cases it will be found that most of those with upper arches shaped like that of this patient and with palatal vaults similarly formed, are persons in whom there has been a distinct loss through arrested development of the upper maxillæ This condition usually affects very vitally both nasal form and structure, and less directly, but almost certainly general nervous conditions also Such persons are commonly highly nervous, and many times have nervous habits of one kind or another that are closely akin to chorea or similar affections I think these corrective possibilities should be considered first and surgical procedures afterward, but if it finally be decided that resection is necessary, I am satisfied that we can do no better than to follow either Dr Babcock's or Dr Harsha's method

Dr. A J Flanagan, Springfield, Mass I would like to find out the length of time that such cases as these have been under observation For instance, some have spoken of the inferior dental nerve not being affected in these operations, is there any instance of some years' standing in which the inferior dental nerve has been removed and a record kept of the conditions which follow? Has there been a case of which a record has been kept for more than fifteen years, in which there has been no paralysis, no nephritis and no symptom of conditions such as Dr Brown spoke of? Is there any record of positive results of never having any trouble because of the removal of the inferior dental nerve?

Dr. T L Gilmer, Chicago I have one case that I know positively is of fifteen years' standing, in which I removed the second branch of the fifth nerve, going underneath the eye to do so, and the pulps of all the teeth are still alive

Dr J Lowe Young, New York Study of Dr Harsha's models shows that it is impossible to put these plaster teeth in occlusion The best that can be hoped for from this operation, if these models are accurate, is the cosmetic effect It is impossible, I think, for any man to get a good chewing apparatus with these teeth by any surgical operation, such as has been done here There are cases in which it is advisable to perform surgical operations, I have had a few cases in my practice, but they were in adult life I am not in favor of treating adults orthodontically, because the orthodontic trouble really goes back to bone development Bone development is very slow at any time, and particularly so in adult life, and I do not want to attempt the treatment of a case without the possibility of seeing the finish I would like to suggest, however, to the surgeons to whom these cases come, to be exceedingly careful of the conditions Accurate impressions should be taken and plaster models should be made to determine if proper occlusion can be obtained in the place that the incision is to be made In Dr Harsha's case the wiring of the teeth together does not help very materially to hold the front portion of the mandible in place, because the incision is back of the last molar tooth This also applies to Dr Babcock's operation, that is why I think he had to use the steel plates in one of the cases to which he referred If it were deemed practical to make the incision further forward, then I think it would be very much easier to get fixation of the part, which, of course, would facilitate the final union of the bone

Dr W M. Harsha, Chicago The contraction of the upper arch was from side to side, the upper incisors did not recede but were nearly normal in direction The palate was high It is known that afferent nerves regenerate much more readily (from the peripheral side) than the efferent I have frequently resected the inferior dental nerve with apparently too early regeneration, and with no appreciable injury to the teeth. Resection at the point which Dr Babcock selects does not, in my opinion, restore the proper angle, as is possible at the point where I did it In my case the line of the mandible was almost straight The Lane plates could be used on the jaw, but in compound fracture, for instance they would generally have to be emoved, while in simple fractures union is so prompt, that for the short time required apposition can be maintained by more simple means

BLENNORRHAGIC KERATOSIS *

BURCHARD H ROARK, S B, M D
SPOKANE, WASH

Last June I reported to the Spokane County Medical Society a case of an unusual keratosis attending gonorrhea, which I now report as a typical case of blennorrhagic keratosis Except for the report of this disease by Simpson,[1] I should not be able at this time to classify this case properly It is, I believe, the second case reported in America, and the twenty-second case recorded in medical literature It is of special interest because it is probably a gonorrheal skin disease

History—The patient, W B, aged 26, American of Welsh parentage, with negative family history, and unimportant personal history except for two attacks of gonorrhea, came under my care May 9, 1912, suffering with an acute gonorrhea and with horny like, papular eruptions on the soles of both feet. His gonorrheal infection began two weeks previous to my seeing him, and had been running rather a mild course until about the tenth day of the gonorrhea, when he noticed about forty nodular patches on the soles of both feet, somewhat more on the left than on the right foot, which were intensely painful and made walking impossible, and his left ankle became greatly swollen, painful and tender

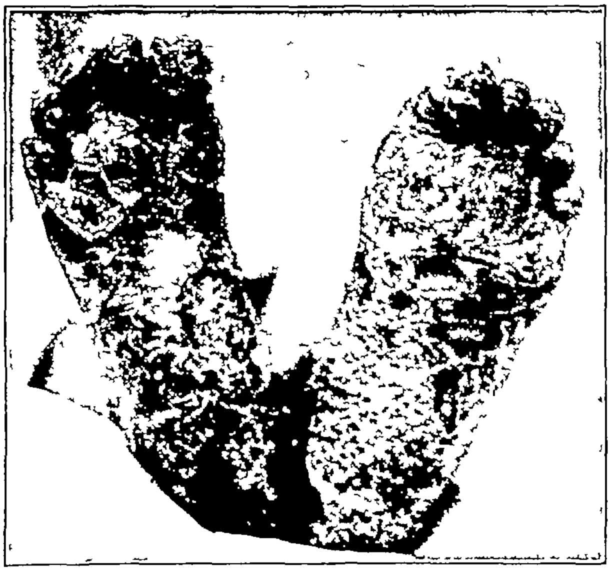

Fig 1—Appearance of the soles of the feet in a case of blennorrhagic keratosis

Examination—I found the patient with temperature of 101, pulse 100, and his appearance one of moderate toxemia He was suffering with a typical gonorrheal urethritis, a gonorrheal arthritis, undoubtedly of the left ankle, and the keratoid nodules mentioned These were characterized by a greatly thickened epidermis beneath which was a disk shaped gelatinous like mass of secretion which could be picked out without breaking or crumbling, of the consistence of putty, yellowish gray in color When the keratoid formation and the disk shaped mass were removed, a moist pinkish base remained, appearing as new skin These nodules measured about 2 or 3 cm in diameter, were round, and raised about 1 cm above the normal surface In this condition he was sent to the Sacred Heart Hospital where he remained under observation for four and one-half months His temperature ranged from 99.5 in the mornings to 100 or 101 in the afternoons At no time did his temperature exceed 101 8, though it sometimes varied greatly at different times of the day His pulse varied from 56 to 120, going up and down with the temperature

Course—The crusty horn like nodules multiplied on the soles of the feet until there was excoriation of large areas of the epidermis (Fig 1) The toe nails soon showed great thickening under their tips, becoming separated from their base, as this keratosis extended back under the nails, and a yellowish gray transparent secretion escaped from under the nails Within three weeks all of his toe nails came off leaving a pinkish tender nail bed exposed This bed would soon be covered (within two or three days) with a thick yellow crust which, when removed, would be followed with another similar formation Meanwhile, over the dorsum of the feet and about the ankles there appeared little papular eruptions about the size of the head of a pin, containing under the thickening epidermis a little drop of yellow mucoid secretion Gradually for several days these papules enlarged until waxy, horn like nodules appeared as first described, giving the feet and ankles a loathsome appearance If the top were pinched off and the yellow wax removed, the epidermal thickening continued and the result was the characteristic round cone like nodule, 'roughly resembling" as Simpson says, "in consistence and appearance the pustules of small pox" Except where two or more of these patches coalesced, they were invariably round and cone shaped (Fig 1)

The patient's finger nails began the same process of exfoliation as occurred with the toe nails, the nails of the right thumb and middle finger coming off entirely, while the index finger nail on the right hand and the thumb and little finger nails on the left hand showed thickening under their tips and separated about half way back, at which point the process stopped with the general improvement of the patient.

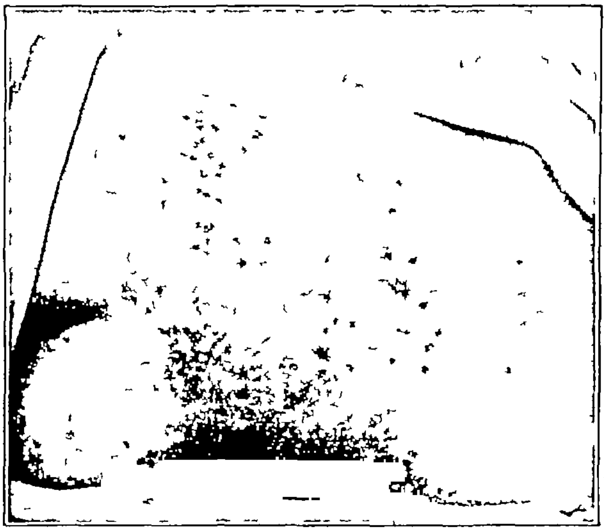

Fig 2.—The back of the patient

Meanwhile, within six weeks after the patient entered the hospital, the same crust like nodules appeared on other parts of the body eight on the scalp, two on the left arm, many covering the right thumb and middle finger, one on the dorsum of the left ring finger, one over the sternum, three large ones on the front of the left knee, a few along the outer part of both thighs and many over the lower back (Fig 2)

A severe balanitis persisted for over two months

In addition to the arthritis of the left ankle joint, arthritis developed in both knees, left hip, second joint of right middle finger, right elbow and slightly in both shoulders

May 14, Wassermann test negative Dr M M Patton

Smears from the little drop of yellow wax in the early formation showed no microorganisms One blood serum tube culture showed, after three days a watery growth which was a pure culture of a Gram negative diplococcus but appeared too fat for the Neisser diplococcus and not similar in cultural peculiarities, growing readily [illegible] potato for example I am inclined to attach no significance to this growth in the absence of any other results from smears or cultures, and account for it as a contamination, but relate its appearance because of a possible value it may have in further study of cases

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* Read before the Spokane County Medical Society Oct. 24 1912.

[1] Simpson Frank E. THE JOURNAL A M A. Aug 24 1012 p 607

Treatment—Beginning May 28, an injection of gonorrheal mixed vaccine (Cutter) was given every second day for sixteen days, beginning with 25 million gonococci and increasing to 250 million During all this time the condition of the patient was grave, and because many who saw the patient regarded the case as possibly one of syphilis, I followed the eight injections of gonorrheal mixed vaccine, in spite of the negative Wassermann, with 0 6 gm salvarsan, administered intravenously Following this, while the patient was at his worst, Dr M M. Patton made an autogenous vaccine from cultures from the feet (containing *Staphlococcus aureus* and *S albus*) and administered seven doses altogether

Local treatments were superfluous, except in so far as mixed infection might be excluded The isolated nodule seemed to do better if left absolutely alone

Finally, along the first ten days of August, after the outlook began to appear hopeless, the patient began to improve and made a rather rapid convalescence I believe that the administration of the gonorrheal mixed vaccine was of benefit, at least the joint involvement improved following its use, though the skin lesions did not seem to improve, possibly because the feet at this time began to show evidence of ordinary pus infection For this the autogenous vaccine produced by Dr Patton may have done more good than we were inclined to believe

Internal medication was symptomatic and unimportant

At present, Oct. 24, the patient is progressing nicely The exfoliated nails are returning and the skin is smooth All joints are normal except that the right middle finger and the big toe of the right foot remain flexed, and the shoulders are a little stiff The left foot swells after walking, but only slightly The patient's weight is 102, and during the last twenty days he has gained about 1 pound a day His usual weight is 125

The patient relates that in June of 1908 while suffering with acute gonorrhea and gonorrheal rheumatism he had many crusty horny like nodules on the soles of his feet which disappeared with his convalescence from the gonorrheal trouble In the absence of any other etiologic factor, I feel that we are justified in considering this peculiar condition a gonorrheal skin disease

204 Fourteenth Avenue

EXOPHTHALMOS IN SCURVY*

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NEW ORLEANS

A review of the literature on the condition of the protrusion of the eye in connection with scurvy shows that the terms "proptosis" and "exophthalmos," which are synonyms, are used to designate varying degrees of the protrusion Proptosis is the more commonly used, and specifies the condition when not extreme, whereas exophthalmos is the term always employed to signify the extreme protrusion of the eyeball

The committee of the American Pediatric Society in its "Collective Investigation of Infantile Scurvy in North America," in 379 cases reported that swelling and protrusion of the eye was noted in forty instances[1] Heubner,[2] in his collection of sixty-five cases, states that the orbit was involved four times, and Jacobi,[3] in forty cases, four times In the foregoing cases it is not stated whether the protrusion of the eye was slight, or whether there was a decided exophthalmos In view of this fact, and also becauses cases of exophthalmos in scurvy have been rarely reported, it is reasonable to presume that had these cases been extreme, they would have been published

Text-books on the diseases of children make unimportant and subordinate mention of proptosis in some instances, and vague mention in other instances, in some text-books there is no mention at all made of the symptom In text-books and journals on the diseases of the eye, even less is to be found on the subject In only two instances[4] was it possible to find mention of orbital hemorrhage in scurvy The references in both instances are practically the same[5]

The case of Magnus, which he reported in 1878, is probably the first report of exophthalmos in scurvy Before Barlow's[6] article in 1883, on "Cases Described as Acute Rickets, Which are Probably a Combination of Scurvy and Rickets, the Scurvy being an Essential, and the Rickets a Variable Element," many cases of scurvy were reported as acute rickets A case appearing under the title of "Acute Rickets" was reported by Moller[7] in 1862, in which there was an exophthalmos In this case, because of the absence of affection of the limb bones either during life or at post-mortem, Barlow did not include it as one of scurvy in his analysis It must be said in this connection that cases have appeared in more recent years in which the diagnosis of scurvy has been made with few symptoms other than exophthalmos

The number of cases of exophthalmos in scurvy appearing in literature are very few It has been possible for me to collect reports of only thirteen cases, including my own, which are reported in full From the study of these cases, (which I have tabulated and appended to this paper,) and the literature on the subject, the following may be said

Proptosis or exophthalmos in scurvy consists in a protrusion of the eyeball from its orbit. This protrusion may be of variable degree, from slight to extreme It may occur at any time during an attack of scurvy, it is at times caused by violent fits of crying (Cohn,[8] Jacobi,[9] DeBuys) and appears suddenly, or it may be precipitated by prolonged crying (Jacobi[10]) Extreme exophthalmos is rarely seen, though protrusion of the eyeball may occur in from 6 to 11 per cent of cases of scurvy The condition may be caused by ecchymoses, into the loose areolar tissue around the orbit (Railton,[11] Fischer,[12] Carr,[13] Hutchison[14]) or the subperiosteal extravasations of blood which are seen elsewhere may be found also in the bones of the head and face (Miller,[15]

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* Read in the Section on Diseases of Children of the American Medical Association, at the Sixty Third Annual Session held at Atlantic City June 1912

* Because of lack of space this article is abbreviated in THE JOURNAL by the omission of the skiagrams and the tabulated details of cases The complete article appears in the Transactions of the Section and in the author s reprints

[1] Boston Med and Surg Jour 1898 cxxxviii 605
[2] Heubner Berl klin Wchnschr 1903 No 3 p 289
[3] Jacobi Diseases of Children 1909 p 219
[4] Weill Ztschr f Augenh 1903, ix, 516 Grounouw Graefe-Saemisch Handbuch Ed. 2 ii, 324
[5] Magnus Deutsch med Wchnschr 1878 No 28 Krukow Vjest Opthal x 275
[6] Barlow Tr Roy Med and Chir Soc. of London 1883 lxvi, 159
[7] Möller Kronenberger med Jahrb 1862 iii Part 2 p 135
[8] Cohn Referred to in article by Schlesinger in München med Wchnschr 1905 No 43
[9] Jacobi Diseases of Children 1909 p 232
[10] Jacobi Diseases of Children 1909, p 222
[11] Railton Lancet London i 532
[12] Fischer Diseases of Infancy and Childhood p 337
[13] Carr Practice of Pediatrics p 335
[14] Hutchison Lectures on Diseases of Children, 1910 p 174
[15] Miller Medical Diseases of Children p 77

Sheffield,[16] Pfaundler and Schlossman[17]) In the instance of exophthalmos the hemorrhage takes place beneath the periosteum within the orbit, and does not interfere with the motility of the eye Barlow[18] believes that he has evidence for the conclusion that subperiosteal hemorrhage within the orbital cavity caused the exophthalmos in his cases, while Meyer[19] and Snow[20] were able to demonstrate at autopsy the presence of subperiosteal hemorrhage within the orbit in their respective cases

The exophthalmos may appear in one or both eyes, beginning in one and involving the other subsequently It comes on suddenly and causes a displacement of the eye forward, downward and outward There may be an improvement, the eye returning to its normal position, to be followed by a recurrence (Magnus,[5] DeBuys), or the eye may remain stationary, and at intervals the symptoms increase (Jacobi,[3] DeBuys) If the hemorrhage extends in front of the fascia orbitalis there may be an associated ecchymosis and suggillation, the upper lid becoming discolored and puffy, caused by the infiltration of blood into the loose connective tissue of the lids, or the exophthalmos may exist as the sole evidence of hemorrhage into the loose areolar tissue within the orbit, or of subperiosteal hemorrhage within the orbit providing the hemorrhage does not extend in front of the fascia orbitalis This symptom is usually a late manifestation in scurvy, though it has been noted as being among the earlier evidences (Schlesinger[21]), and Barlow[22] has described a case in which the exophthalmos was the only symptom of the disease

Proptosis or exophthalmos should not be confounded with the conditions more frequently found when there is actually no displacement, but the ecchymoses and suggillations are in the soft tissues in front of the eye, and hemorrhage under the conjunctiva, giving the effect of a displaced eye In these conditions the tissues may become so much involved as almost to close the eye, whereas in exophthalmos the aperture of the lids is much wider than normal and the eye is seldom completely covered by the lids

In injury of the eye producing a proptosis or exophthalmos, besides the history of the injury there are wanting the other evidences of scurvy, and the therapeutic test will clear the diagnosis

In malignancy there is not the sudden swelling, the motility of the eye is impaired in extreme cases, the evidences of scurvy are not present, and antiscorbutic treatment also has no effect

Gumma of the periosteum within the orbit may produce an exophthalmos, but the onset is very slow and gradual

Mucocele, encephalocele and hydrocephalus may give rise to a displacement of the eye, but there are enough other symptoms in these conditions to permit a differential diagnosis

Barlow[23] states that he is of the opinion that in no disease, even syphilis, is the therapeutic test of more value than in scurvy In making a therapeutic diagnosis should there be no improvement in four or five days, the diagnosis should be questioned

Within the past few months it was my good fortune to see the following case of extreme exophthalmos in a case of scurvy

REPORT OF CASE

History—T G white female aged 11 months, only child of healthy parents, appeared at my clinic at the Touro Infirmary, Nov 23 1911, because of one eye protruding almost out of its socket and because of pains in the limbs which were diagnosed as rheumatism by a physician

The baby was born at full term by a foot presentation after a prolonged labor She weighed about 4,082 gm (nearly 9 pounds) at birth Her eyes became sore shortly after birth, and she had a nasal discharge The mother nursed her exclusively on the breast for six weeks She was then given malted milk for two weeks Then, because of frequent stools, condensed milk was given She was ill with "cholera infantum" for two weeks, and was put back on malted milk, which was continued thereafter Her feedings were irregular, as was also the quantity given at each feeding At 4 months she had two teeth, and at 8 months she was able to sit alone There had never been any convulsions Aside from "cholera infantum' at 2 months, the only sickness up to the present illness was a siege of boils which continued throughout the past summer From this time on it was noticed that the baby perspired very freely, particularly about the head The present illness began about the middle of August, 1911, when her left leg was knocked on being lifted from her chair She screamed as if her leg were broken" and it began to swell She seemed to be in pain when touched, and was very cross and restless at night About one week later the parents consulted the family physician who diagnosed the condition as rheumatism It was found out later that he believed it to be syphilitic, and the baby was treated with mercury by inunction She was also given drops, persumably iodid in some form

In the latter part of August one day about five minutes after her bath, the baby cried violently The mother on going to her to investigate the cause of her crying, noticed that her right eye was protruding, and that the upper and lower lids were discolored and swollen These symptoms remained the same for three or four days, and then became better gradually for three or four days, at the end of which time the eye was apparently back in its normal place so that it could not be noticed that it had been pushed out Three weeks after this it again protruded, but the discoloration was not so marked as with the first attack The discoloration remained for about one week The exophthalmos continued for about one week, but improved slightly during that time The protrusion was not so pronounced as on the first occasion, nor was the improvement so marked It then suddenly protruded again much more than on the other occasions, and remained out until it was seen by me three weeks later The mother stated that there was no discoloration the third time, and that the protrusion was increasing very slowly until I saw it. The patient's eye was not completely closed during sleep The second and third occasions of protrusion of the eye were at night, the displacement being noticed in the morning

The baby had four upper incisors and two lower central incisors when her leg was hit Her gums were red and swollen at the time of the first exophthalmos Three weeks later they were bluish red The baby seemed to be in much pain, cried a great deal and was irritable At night she was restless There had been no fever The appetite was poor and at times there was vomiting of a greenish substance The stools were not noticed as being different from her normal stools The urine was brown since before the first exophthalmos, was plentiful, and stained the napkins On one occasion after the second exophthalmos, when the baby vomited, blood came from her nose Other than these there were no hemorrhages noticed

Examination.—The child was poorly developed and poorly nourished anemic, much emaciated, 65 cm (25¼ inches) long weighing 5,132 gm (a little over 11 [illegible]) She was anemic, and the mucous [illegible] were [illegible] ght eye

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16 Sheffield Modern Diagnosis and Treatment of the Diseases of Children 1911 p 507
17 Pfaundler and Schlossman Diseases of Children 1908 ii 189
18 Barlow Keating's Cyclopedia of the Diseases of Children 1889 ii 275
19 Meyer Berl klin Wchnschr 1896 p 85
20 Snow Arch. Pediat 1905 xxii, 576
21 Schlesinger München med Wchnschr., 1905 No 43 p 2073
22 Barlow Centralbl f inn Med 1895 No 16 p 532
23 Barlow Keating's Cyclopedia of the Diseases of Children 1889, ii, 277

protruded almost out of its socket, being pushed forward, outward and downward There was no pulsation The eyelids were clear, but apparently puffy The movements of the eye were not impaired, and the sclera and conjunctiva were normal The baby lay with her legs everted and flexed, and there was apparently no muscular power There was no inclination to move the arms The skin was clear with the exception of the right leg, on which there were two ecchymotic spots Over the thighs and legs, which were very much swollen, the skin was tense and glossy The thorax was flattened anteroposteriorly, the sternum was depressed and the abdomen distended *On being moved for examination the baby cried* as if in much pain The head was rather square and the anterior fontanel was opened and depressed The sutures were not closed There was costal beading and slight kyphosis, but the epiphyses were normal *Examination of the abdomen* showed it to be soft, with walls flabby, but liver normal and *spleen not felt* Examination of the heart and lungs was negative The arms, legs and back apparently lacked muscular power, though no attempt at determining the muscular power was made because movement was accompanied with great pain The thighs were much swollen, the deeper structures especially so The shafts of the femora were firm and thickened for almost their entire length The same condition existed in both legs, the swelling being mostly about the lower ends of the tibias The joints were normal There was pain on moving the arms, in fact, touching the patient almost anywhere seemed to cause pain.

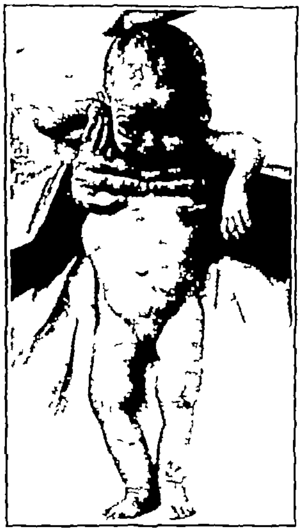
Fig 1 —A photograph taken Nov 23 1911 (before treatment was begun), showing the exophthalmos with the forward and outward displacement The peculiarly flattened chest may be noticed, and the angle or bending of the ribs The thighs and legs particularly on the right side are much swollen The feet also are swollen The ecchymotic spots on the right leg can be seen

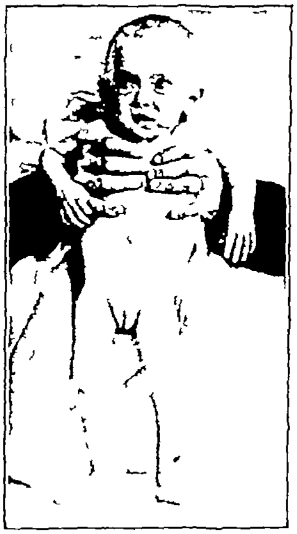
Fig 2.—A photograph taken Dec. 5 1911 (after treatment was begun) shows improvement in the exophthalmos and in the child s general condition The expression of pain has disappeared. The state of nourishment is better This can also be seen by comparing the abdomen with Figure 1 Improvement in the legs can readily be seen *also disappearance* of the ecchymotic spots Swellings of the feet also have disappeared.

The respirations were normal, pulse, 164, temperature, 38.8 C (101 8 F) by rectum. The gums were reddened, spongy and swollen She was referred *for examination* of her eyes Dr M Feingold reported that both fundi were normal, and that there was a tumor of some sort pressing within the orbit in the upper half and inner side The examination of the nose was negative, there being no evidence of acute or chronic inflammation

Treatment and Subsequent Course—The mother was requested to take the child to the radiologist for skiagrams, but she did not do so, and was lost sight of for a few days, even before the blood and urine could be examined. Twelve days elapsed before the patient was seen again In the belief that an interesting case was about to be lost sight of a special endeavor was made to complete the examinations, with the result that skiagrams, photographs and examinations of the blood were made Owing to the inability of the mother to secure the urine, an examination of it was not made, but the mother stated that the urine was no longer brownish, it having cleared entirely two or three days after the first visit On the occasion of the first visit, the mother was instructed to give the baby a teaspoonful of orange juice every four hours, proper instruction regarding feeding was *also given* When the patient was seen the second time the exophthalmos was much improved, the eye having almost returned to its normal position, the legs were greatly reduced in size, and were not very painful The ecchymotic spots *on the leg had disappeared, the baby was much more* quiet and less irritable, and there was hardly any pain on being handled This interesting improvement was attributed solely to the use of orange juice, because the mother had not changed the diet as she had been *instructed* The *photographs* (Figs 1, 2 and 3) before and after twelve days of treatment also show the improvement In spite of these marked changes, the skiagrams taken twelve days after the treatment was instituted (Figs 5, 6 and 7) show unmistakable evidence of scurvy

The result of the blood examination showed hemoglobin, 65 per cent, red blood corpuscles, 3,920,000, white blood corpuscles, 4,950, neutrophils, 42 per cent, small lymphocytes, 50 per cent, large mononuclears, 5 per cent, eosinophils, 3 per cent Coagulation time was between five and one half and six minutes (Wright)

It developed that the reason the patient was not placed on the prescribed diet was for fear of the parents' incurring the displeasure of their society physician, who had continued the usual diet The parents consented to allow further observations of the patient to be made in appreciation of the improvement following the antiscorbutic treatment

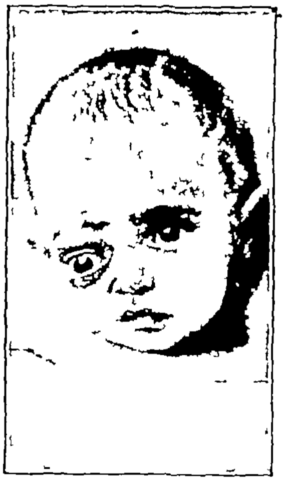
Fig 3 —A photograph taken Nov 23 1911 (before treatment was begun) allows a better study of the exophthalmos. Its displacement downward outward and forward can be seen The facial expression also can be studied *more closely*

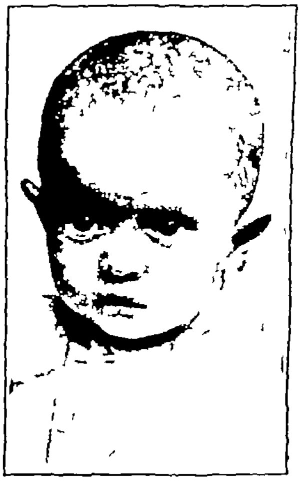
Fig 4 —A photograph taken April 15 1912 before the leg had thoroughly assumed its normal position

The patient was again seen *April* 9 She was *15 months* old, and with her clothes on weighed 6,987 gm (nearly 10¼ pounds) The anterior fontanel was open and measured 5 cm by 5 cm (nearly 2 inches) She was pale and sallow, had seven teeth and could sit up, but could not walk There had been no further trouble with her eye, and no return of any other symptoms of scurvy The orange juice had been continuously given, the diet remaining the same It is interesting to note that after the first marked change following the use of orange juice, *the further improvement had* been very slow, probably because the diet had not also been changed This was shown by subsequent photographs and skiagrams (Figs 4 and 8) and also by the examination of the eye, there still remaining a slight exophthalmos· The report of Dr Feingold was as follows palpebral opening narrowed, difference of about 1 mm, and probably shorter, with Hertel *exophthalmometer unsatisfactory examination*, exophthalmos of about 1 5 mm on right side, lower half of right cornea more covered than in the left eye, upper lid also covering more of cornea in the right than in the left eye, pupillary reaction and motility perfect

A series of examinations was made again on this visit resulting in some further improvement. The blood examination showed hemoglobin, 90 per cent red blood corpuscles, 4,230,000, white blood corpuscles, 6,250, neutrophils, 44 per cent , small lymphocytes, 50 per cent , large mononuclears, 6 per cent The coagulation time was between three and three and one half minutes (Wright) Wassermann and von Pirquet reactions were negative

DIAGNOSIS OF CASE AS SCURVY

The clinical picture of the case is typically that of scurvy *Certain conditions, however, must be excluded* because they present some of the symptoms found in this case

Rheumatism was excluded because it is a rare condition at this age, and also because when rheumatism is found before the fourth or fifth year it rarely manifests itself by swelling of the joints, and when rheumatism does involve them there are evidences of inflammation In this case not the joints but the shafts were involved, and there was no redness or evidence of inflammation

Osteomyelitis was excluded because it is a condition in which there are high fever, abscess, and usually one bone involved

Sarcoma was excluded because it does not involve as a rule more than one bone, is progressive in its course, and because antiscorbutic treatment has no effect on it

Syphilis was excluded because the pseudoparalysis in lues appears at a much earlier age and is one symptom of a condition in which there are many other manifestations Again, had the condition been syphilis the liver and spleen would have been enlarged and the antisyphilitic medication used should have improved the condition in over two weeks' treatment instead of aggravating it On the other hand, the improvement under the influence of orange-juice was a therapeutic diagnosis sufficient to remove all doubt The negative Wassermann may have been produced by a prolonged course of antisyphilitic treatment, but the history does not warrant the suspicion of syphilis

In confirmation of the diagnosis against the foregoing conditions, the skiagrams offer positive proof of their non-existence

Anterior poliomyelitis was excluded because there was a negative history for infantile paralysis, and because of the symptoms of scurvy being characteristic In doubtful cases an electrical reaction is diagnostic This was neither advisable nor necessary in this case

Purpura could not be considered because there is an absence of the history of improper feeding in purpura, and it is not accompanied with swelling of bones from hemorrhage with accompanying pain

That medication had no influence on the production of the condition is shown in the history, as the disease began before the drugs were given, and the improvement was marked before they were discontinued

In rickets there are no ecchymoses, no pain, no spongy gums and also the ends of the long bones are involved It must be remembered however, that for a long time the two conditions were considered together until Barlow's original article Moreover, rickets and scurvy are frequently seen together probably because the diet that produces scurvy may be also an etiologic factor in the production of rickets

The exophthalmos might have necessitated differentiation from malignancy and trauma, but the other evidences of scurvy and the diagnostic significance earlier considered in this paper readily exclude both

Finally, the therapeutic test of the diagnosis establishes the case as one of scurvy

I wish to express my thanks to Dr M. Feingold for the examinations of the eye Dr A. D Henriques for the skiagraphic work, and Dr C C Bass for the laboratory examinations

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ABSTRACT OF DISCUSSION

Dr H M McClanahan, Omaha I see about four cases of scurvy a year in consultation In three out of four of my cases the diagnosis had not been made Out of ten cases of which I have records, in four the first symptom was hematuria In three of these a diagnosis of scurvy was made on the hematuria as the only symptom

Dr W W Butterworth, New Orleans In spite of all our education along certain lines we have not educated the physician to differentiate between so called rheumatism and scurvy in the young infant It seems that it is still possible to make this mistake

Dr. L R. DeBuys, New Orleans I believe the English pay more attention to the examination of urine than we do As I understand it, in some institutions a routine examination is made consequently they find blood in the urine more frequently and are thereby better able to recognize those cases of scurvy in which the bloody urine is an early symptom In scurvy the lower extremities are more commonly involved than the upper Rheumatism seems to be the condition most often confounded with scurvy, and this mistake in the diagnosis is the one most frequently made

In one of my radiographs a condition can be seen which I have not been able to find before the zones of proliferation in the bones Most radiographs show the early conditions of scurvy which are important for diagnostic purposes, but I have seen no other radiographs which show these changes

OCCUPATIONAL SKIN DISEASES [*]

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With the exception of certain well-defined types, occupation dermatoses as a class have not, in this country at least received the attention they merit While every dermatologic clinic numbers among its applicants each year many patients in whom occupation has a direct or indirect bearing on the causation of their eruption it is difficult, owing to lack of systematic investigation, to give a definite idea as to the prevalence of skin affections in the various trades At my own clinic at the University and Bellevue Hospital Medical College about 2 per cent of the total number of new cases for 1911 constituted occupation dermatoses The great majority of these were of the type known as trade eczemas, and while many cases yield readily to treatment and proper preventive measures, others constitute a serious inconvenience from an economic point of view, sometimes necessitating a complete cessation from work or a change of occupation.

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[*] Read in the Symposium on Industrial Diseases in the Section on Preventive Medicine and Public Health of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912.

Cutaneous vulnerability is more or less an individual peculiarity, for while there are persons who are so sensitive to an irritant — physical, chemical, thermal or actinic — that they react after a short exposure or contact by an acute dermatitis, others remain entirely unaffected. Occasionally such persons exhibit so high a degree of sensitiveness that instead of their acquiring an immunity, an increasing susceptibility is established. Fortunately these cases are not very common, and workers who are subjected to continuous injury usually do not develop lesions until after a longer time, either from the summation effects of the irritant or because the resistance of the skin has been gradually undermined.

After such a cutaneous outbreak there is frequently a tendency to acute exacerbations at regular intervals or when the occupation is resumed. These eruptions may then persist for years. While the skin both anatomically and physiologically is endowed with a relative amount of protection against the action of irritant substances, by reason of its exposure it is subjected to injuries of every description and these may lay the foundation for a subsequent eruption. In addition, there are other contributing factors, such as a "special susceptibility," a delicate skin or one presenting some congenital anomaly, as excessive dryness or ichthyosis, impaired gastro-intestinal, hepatic or renal function, a depressed state of health, neglected hygiene of the skin, or its lowered resistance because of a preexisting eruption.

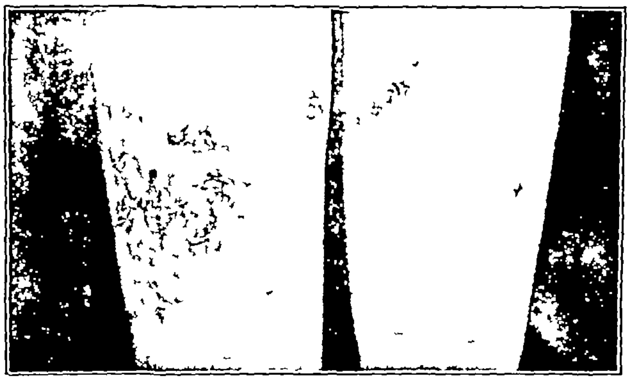

Fig. 1.—Erythema induratum (Bazin's disease).

The same etiologic factor is often found operative in both allied and unrelated trades owing to similar conditions under which the work is done, when, for example, men or women are exposed to excessively dry or moist heat. Such an atmosphere leads to congestion and interference with the normal activity of the skin which is followed by various inflammatory processes and sweat-eruptions like prickly heat. These affections are seen in cooks, stokers, firemen, foundry-workers, etc. A warm, moist medium such as laundresses work in sometimes produces a cystic condition of the sweat-ducts of the middle third of the face, known as hydrocystoma. Cold, by favoring the development of chilblains, causes much suffering among persons who are obliged to carry on their work outdoors or in poorly heated places. In factories in which drastic measures are employed for the removal of dirt or stains, cleansing agents like chlorinated lime (chlorid of lime) or benzin used on the hands supplies the base for an eczema by divesting the skin of its natural secretions. Oil, which is used wherever machinery is installed, is the causative agent of acneiform and eczematous lesions in employees who operate or are otherwise engaged about such apparatus. In occupations which necessitate standing, persons who have a tendency to varicose veins not infrequently exhibit this condition with a secondary eczema and ulceration. Slight traumatisms lead to erosions of the skin which often become infected in patients who, owing to the venous congestion, have slight resistance. Young women who are obliged to stand at their work sometimes develop erythema induratum or Bazin's disease, which is characterized by nodules beneath the skin which may break down and produce ulcers. Some of these forms of Bazin's disease have been proved to be tuberculous. The infection is usually of benign type and readily yields to rest in bed, improved nutrition and a change to better hygienic surroundings (Fig. 1).

Many occupations bring about changes in the skin which are not pathologic in the strict sense of the word but are so characteristic for certain occupations that Blaschko has given these changes the name of "trade stigmata." These include localized thickenings of the horny layer in shoemakers, tailors, musicians, etc., bronzing of the skin in gardeners, farmers and other persons who follow outdoor occupations, staining of the hands of dyers, chimney sweeps, etc., pigmentation in workers in silver from a deposit of the metal and in millers from iron particles, etc.

The skin may respond to the most diverse irritants by the production of a catarrhal inflammation, or may develop different types of eruption from the action of the same agent. An example of the former may be found in the trade eczemas and of the latter in the effects of tar, which may cause eczema, acne, warty and epitheliomatous lesions, alone or intermingled.

The commonest type of occupation disease is an eczematoid dermatitis. In a recent article Herxheimer[1] enumerates seventy-four trades provocative of this form of disease. It may vary in grade and intensity from an erythematous and scaling dermatitis to a vesicular and bullous eruption. As the condition becomes chronic, infiltration of the skin takes place with desquamation and fissuring. With the cutaneous defenses lowered, pus infection is frequently superadded.

The excessive use of soap and water reduces the resistance of the skin by extracting the fat and macerating the horny cells. They may then act as direct excitants or prepare the way for some other irritant, as washing powders, etc. Severe eczemas of the hands and forearms are seen in those whose occupation requires them to have their hands continually in water, as in the case of washerwomen, housemaids, barkeepers, etc. In my clinic nearly one-third of the occupation diseases during the past year were seen in persons whose vocations necessitated the frequent employment of soap and water and, in some cases, the various cleansing alkalis.

In bakers a form of dermatitis of the hands and forearms is known as baker's itch. The exciting causes are the heat, the moist dough and saccharin solutions. A mite said to live in flour has also been incriminated. Candy-makers suffer from a similar eruption as well as from impetiginous lesions. Confectioners, bakers and preservers of fruit frequently show an eczema of the fingers and peri-ungual tissues from the action of fruit acids.

Winfield[2] describes a dermatitis in sugar-refiners which involves the hands, forearms and legs and resembles an impetiginous scabies It has been asserted that a mite found in raw sugar is responsible, but this lacks verification Oliver[3] says that in sugar factories a condition known as "lymphangitis of sugar-makers" is sometimes found among the sugar-refiners and molasses-stirrers It is accompanied by a slight constitutional disturbance, and a crop of boils is not an unusual sequel *According to Gaillot the lymphangitis is an infection* caused by the *Staphylococcus pyogenes aureus* This organism is said to be found not in the freshly made molasses but in the residue, the temperature of the factory and the condition of the skin of the workers favor its development

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[1] Herxheimer, Karl: Ueber die gewerblichen Erkrankungen der Haut, Deutsch. med. Wchnschr., Jan. 4, 1912.

[2] Personal communication.

Builders and masons develop an eczematous affection of the exposed parts of the body from the irritating effects of lime and cement In stone-cutters an analogous condition is caused by the stone dust A palmar dermatitis is also seen in brickmakers

Metal workers, from the constant irritation of the dust or filings, or from the direct cauterant action of these or the acids or turpentine used in the various processes, suffer from all grades of inflammation to intractable ulceration

Printers and machinists, from contact with chemicals and oil, often develop a chronic eczema of hands and forearms Electroplaters are also liable to an inflammation of the hands and forearms from the use of a mixture of lime dust and olive oil in "finishing," and from sour beer in the process known as "scratch brushing"

Workers who handle the chromates in the arts and trades suffer from an eczematous eruption as well as from ulceration of the skin and mucous membrane which shows little tendency to heal

Hydrofluoric acid, employed in the manufacture of glass, the bleaching of cane, washing of manure, etc, produces sores of the nasal orifice and gums and painful blisters and ulcers of the skin

The irritant action of arsenic on the skin is well known In the arts and manufactures in which its compounds are employed workers are attacked with eczema or ulcerative or gangrenous lesions, which may be present on the face, neck and extremities, but more especially on the genitals In color-works, ulcers of the hands are designated "arsenic pock" Arsenic sulphid which, with lime, is used in curing fur, sets up a very severe dermatitis in furriers, not infrequently with persistent ulceration (Fig 2)

Chemists are prone to inflammation of the hands and sometimes of the face from handling various drugs and chemicals Their skin often develops so marked a susceptibility that minute quantities or even fumes will call forth an outbreak I have several times noted a similar anaphylactic condition from formaldehyd solution in laboratory workers Another familiar example of an eczema caused by chemical action is eczema of the hands of physicians and nurses from the use of antiseptics, notably mercuric chlorid and phenol (carbolic acid) These forms of dermatitis are very rebellious to treatment

Among miners, smelters and photographers an eruption of erythematous and pustular type is sometimes encountered from the irritant effects of mercury Photographers are also subject to an eczema more especially of the terminal phalanges and nails, from other reducing agents, particularly pyrogallic acid In hat factories eczema of the hands is said to result from the manipulation of hot water acidulated with sulphuric acid

The eczema in tobacco-workers is believed to be caused by the caustic solutions used in separating the tobacco leaves

Calico-printers suffer from eczema fissures and wounds which often become infected The cause is attributed to the bleaching and cauterizing substances handled

In flax-workers and linen-workers various skin affections are reported, among them a follicular eruption caused by the oils and irritating materials used in this occupation In Belgium many of the flax-workers show a peculiar abrasion and ulceration of the palmar surface of the hands Fissures form, exfoliation takes place and when the deeper structures are involved the condition simulates a syphilitic lesion An eruption resembling small-pox has also been described on the forearm, arm and face of workers who remove the bobbins from the spinning-frames From the pressure and friction caused by pulling threads the persons who engage in this part of the work present callosities on their index-fingers

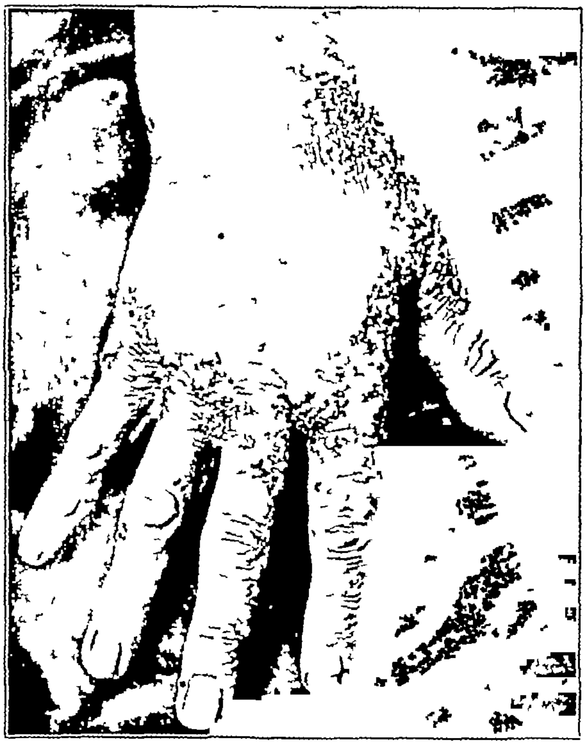

Fig 2 —Chronic eczema of the hand in a furrier

Callosities of the palms are also seen in laborers, engine-runners, etc Among miners they form a special dermatosis called "beat hand" Painful thickenings develop over the regions where the handle of the pick makes greatest pressure, along the bases of the fingers, and over the ball of the thumb and outer side of the hand The subjacent tissue becomes inflamed and not infrequently is further complicated by suppuration To this condition the term "keens" is applied

Warts sometimes form troublesome lesions on the palms of persons engaged in manual work In some cases they are purely epidermic growths, in others in which the epidermis has been removed, the underlying tissue as the result of irritation becomes the seat of exuberant granulations with papillomatous formation

Dyers and workers in anilin colors are apt to develop eczematoid and pustular eruptions on different portions of the body The bad effects are not limited to those in this trade, but the wearers of clothing prepared with certain of the dyes may ultimately be the victims of a severe dermatitis. The black, red and orange-yellow pigments are particularly irritating, marked inflammatory reactions having been caused by socks, gloves, underwear and shoes so colored. I have also seen unusually severe forms of eczematoid dermatitis in barbers who had employed proprietary anilin hair-dyes on their patrons (Fig 3). It is not an uncommon experience in dermatologic practice to be consulted for a dermatitis of the face, neck and ears which had followed the application of some of these hair-dyes. In susceptible subjects the use of hair-tonics may produce similar trouble. Another dermatologic condition common in anilin workers is hyperhidrosis of the palms caused by washing the hands with chlorinated lime for the removal of the dyes. According to Blaschko,[4] it may be so intense as to amount to a flux. The affection is also seen among employees in chlorinated lime and soda works.

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[3] Oliver Thomas Diseases of Occupation E P Dutton & Co 1908

The manufacture of calcium chlorid and sodium and potassium chlorid by electrolysis is sometimes attended by an erythematous and edematous inflammation of the face of the workmen, resembling erysipelas. This is attributed to the sodium hypochlorite that is formed. With the subsidence of the acute process an acneiform eruption is left behind, the so-called chloracne. This is the commoner cutaneous malady seen in this occupation and is characterized by the early development of blackheads on the face, trunk and extremities followed by a grayish discoloration of the face. Inflammation and suppuration of the follicular glands is not uncommonly followed by nodules, pustules, boils and disfiguring scars.

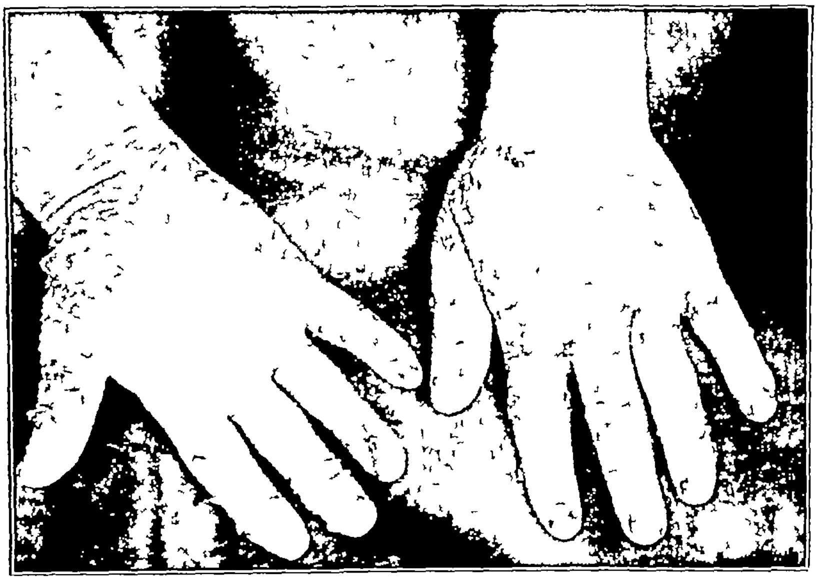

Fig 3.—A dermatitis of the hands in a barber resulting from the use of hair tonics employed on his patrons.

Tar-workers and paraffin-workers develop a similar eruption which may last several months and then change to the so-called "tar itch." This is accompanied by hyperkeratosis and increased activity of the sebaceous glands, forming plaques and crusts, with the further development of multiple warts, one or more of which degenerate into malignant growths. The disease affects chiefly the hands, forearms and scrotum. It progresses slowly and in many instances no recurrence takes place after removal of the epithelioma. Oliver cites the case of a man aged 58, who had worked among coal-oil and tar products for thirty-years. He presented numerous indurated patches, some of which had ulcerated, as well as multiple black warts and scars, the remains of old ulcers. His son, aged 27, following the same employment, developed a malignant growth of the forearm which necessitated amputation. Metastases of the axillary and cervical lymph-nodes took place and the patient succumbed to secondary carcinosis.

Cancer in chimney-sweeps has been reported chiefly from England. The soot produces a chronic irritation of the skin and when retained in such regions as the folds of the scrotum causes warty growths which become epitheliomatous. In some instances the hands, arms and thighs have been involved. With the advent of machinery for cleaning chimneys the incidence of scrotal cancer has been markedly reduced. It is reported that gardeners who employ soot for the protection of plants from slugs in a like manner show the effects of this irritant in the development of malignant growths of the hands.

Gardeners and florists frequently suffer from some form of inflammation of the hands and arms occasioned by contact with certain plants. It is estimated that between sixty and seventy plants possess this irritant action and the power to induce a dermatitis. The more familiar ones are poison ivy, poison sumac, primrose, chrysanthemum and eucalyptus, the eruption varying from a simple erythema to marked swelling with the formation of vesicles and bullæ. Not only are the exposed parts involved but the affection may be carried by the hands or clothing to other portions of the body. It is probable as in the case of *Rhus toxicodendron,* that the active principle in the majority of these plants is an essential oil. Lacquer,[5] which is obtained from a tree belonging to the genus *Rhus,* produces a dermatitis either by direct contact or through the fumes by evaporation. The symptoms, consisting of fever and edema of the skin of the face, limbs and generative organs, nasal and conjunctival catarrh, and a papular eruption of the legs and forearms, appear in a few hours.

The resinous dust of certain hard woods, like teak, ebony, satinwood, rosewood and others, will occasionally set up a dermatitis in carpenters and joiners. In teak, the exciting agent is believed to be an essential oil derived from the central part of the tree and present in the dust. The symptoms are sometimes very severe, the eruption becoming generalized and accompanied by vomiting. It may last for several months and is quite apt to recur when the patient resumes work.

The so-called polisher's itch of the forearms and hands, found in furniture-polishers, is attributed to the methyl or impure alcohol present in varnishes and polishes. Impure turpentine and benzin used for cleansing purposes likewise provoke an eczema of the hands.

In persons who follow an outdoor occupation the uncovered portions of the skin sometimes undergo peculiar degenerative changes. Under the name of

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[4] Blaschko A Gewerbliche Hautkrankheiten Handbuch der Arbeiterkrankheiten T Weyl and Gustav Fischer 1908

[5] Castellani and Chambers Lacquer Poisoning, Manual of Tropical Medicine 1910 p 118

"sailor's skin," Unna has described an affection which he observed chiefly in seafaring men A diffuse cyanotic redness, not unlike chilblain, develops at first on the ears, adjacent parts of the cheeks and temples, the backs of the hands and fingers The skin then becomes mottled, pigmented, rough and hard and in places papillomatous These warts may last for years and slowly undergo a malignant change A similar condition is seen on the face, neck and hands of people who follow agricultural pursuits The cause is sought in the actinic rays The effect of light on the skin is illustrated in *x*-ray workers, in whom, unless protected, the hands become the seat of a mild erythematous squamous eruption, more or less persistent, which is succeeded by pigmentation, telangiectases and atrophic wrinkling This condition may remain unchanged or keratoses may be added which develop into epitheliomas

Drivers and coachmen exposed to the rigors of the weather are often the subjects of the severer forms of rosacea The use of alcohol, however, to which many of these people are addicted, cannot be wholly ignored as a contributing etiologic factor

Certain callings, notably those dealing with dead or live animals or their products, favor the development of infectious diseases Owing to the prevalence of pyogenic organisms, local pus infections, as boils, carbuncles, impetigo contagiosa or cellulitis are not infrequently encountered in butchers, slaughter-house men and other individuals who handle dead animal matter A generalized bullous dermatitis with severe constitutional symptoms and a high mortality has also been observed The starting point is usually an infected wound Several years ago Bowen[6] pointed to a possible relationship between these cases of so-called acute infectious pemphigus and foot-and-mouth disease of cattle, as he had observed such instances during an epizootic of the latter disease in New England Foot-and-mouth disease takes place by inoculation of the skin or mucous membrane in butchers, dairymen, stable boys and drivers Herxheimer records having seen a case in a horse dealer

The parasitic diseases which are more definitely identified with particular avocations are tuberculosis, anthrax, glanders and actinomycosis

Inoculation tuberculosis occurs in its simplest form as verruca necrogenica, or anatomic tubercle It is encountered chiefly among medical students, physicians, hospital ward attendants, and butchers as a localized papillomatous formation usually about the knuckles or other parts of the hand or forearm

Anthrax is uncommon in this country, but it is prevalent in animals in certain parts of Europe and Asia, especially cattle and sheep In man the disease occurs as the result of direct infection from such animals or their products via the skin, the intestines or more rarely the lungs It is seen in the wool-sorting, wool-combing and spinning industries, horse-hair and brush factories, in stevedores, wharf-laborers, carters, farmers, shepherds, butchers meat inspectors and cattle salesmen The internal form is known as wool-sorter's disease Of the external, which is also the more usual, there are two varieties, the malignant pustule and malignant anthrax edema, which is the more fatal of the two

Glanders, usually contracted from horses, is seen almost exclusively in hostlers or those who have to do with these animals It is rare in this country The bacillus may gain entrance through the mucous membrane of the eye, nose, mouth or respiratory tract, or the site of inoculation may be a lesion of the skin Clinically the disease is divided into glanders and farcy, according to whether the lesions of the mucous membrane or skin predominate Both types present an acute and a chronic form

Actinomycosis is endemic in cattle and more rarely affects horses, hogs and other animals In man the disease is seen in those who come in contact with such animals or handle fodder or grain, as farmers, coachmen, dairymen, millers, etc Infection in man takes place through a carious tooth or lesion in the mouth and less often through the skin The ray fungus is believed to flourish on corn, hay and cereal grains, as the latter have frequently formed the nucleus of an actinomycotic lesion

Erysipeloid, an infection of the skin caused by poisoning from meats, fish, poultry, cheese and similar animal products, is seen chiefly in butchers, fishmongers, poultry-dealers, cooks, and scullions Gilchrist[7] observes that crab bites and injury by crabs are a frequent cause The disease is believed by Rosenbach to be caused by a microorganism of the order *Cladothrix* It is characterizeed by one or more areas of slowly spreading inflammation, clearing up at the part originally affected and progressing slowly to new areas, the advancing border being festooned or scalloped Burning, pricking or itching sensations accompany the affection, which involves chiefly the fingers and hands

Among the minor infections may be mentioned ringworm transmitted from horses dogs and other domestic animals to men and boys employed about stables or engaged in the care of such diseased animals Ringworm of equine origin is characterized by the formation of irregular and projecting nodular lesions studded with pustules involving the beard region, neck, wrist or hands

In certain grain regions infested by a mite, *Pediculoides ventricosus,* an intensely itching urticarious eruption is endemic among the farmers and laborers who handle sacks of wheat, barley and other grains or straw harboring this parasite Small epidemics have also appeared at different times from the use of mattresses made from straw which the organism has made its habitat To Dr Jay F Schamberg[8] belongs the credit of priority in describing the affection in this country

In conclusion, while many of the industrial dermatoses lead to little inconvenience, some forms of dermatitis may become so severe that they absolutely prevent a man from carrying on his occupation In certain susceptible individuals the action of the irritant is confined not only to the parts exposed but may spread over the entire body Patients who develop such an idiosyncrasy should be guarded against these forms of dermatitis becoming permanent and advised to use the best means of prevention Such measures cannot be discussed at length in a paper of this scope as they must necessarily fit individual cases If the nature of the work permits, the wearing of masks and gloves to protect the exposed parts, as practiced by Chinese lacquerers, is advisable, but obviously this is not feasible in all forms of occupation The use of soap and water is to be recommended in some trades in order to remove the noxious substances, while in those instances in which they prove to be the irritants they are positively injurious and should be sparingly used In any case, after washing, the hands should always be carefully dried and if practicable covered with a protective ointment, or a salve or cold cream should be thoroughly rubbed into the skin at night Persons whose vocations bring them in contact with live or dead animals or their products should be instructed as to the mode of inoculation of infections from these sources, and all wounds or breaks in the continuity of the skin should be sealed with collodion, plaster or other protective dressing

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[6] Bowen J T Acute Infectious Pemphigus in a Butcher During an Epizootic of Foot and Mouth Disease with a Consideration of the Possible Relationship of the Two Affections Jour Cutan Dis 1004, xxii, 253.

[7] Gilchrist T C. Erysipeloid with a Record of 329 Cases of Which 323 Were Caused by Crab-Bites or Lesions Produced by Crabs Jour Cutan Dis 1004 xxii 507

[8] Schamberg Jay F Grain Itch (Acarodermatitis Urticarioides) A Study of a New Disease in This Country, Jour Cutan Dis 1010, xxviii, 67

8 West Seventy Seventh Street

OCCUPATIONAL EYE DISEASES AND ACCIDENTS *

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A complete catalogue of the various trades and industries in which accidents, even preventable accidents, causing partial or complete blindness of one or both eyes, although suggestive, would be of little service and would necessarily include nearly all the causes of accidents in general It will not be without profit, however, to consider those industrial accidents which are of frequent occurrence Space forbids full consideration of the effects on the eyes of environment, lighting, improper or excessive use of the eyes, the special toxic effect of alcohol and tobacco, and special infections in the ordinary occupations

COMMON, PREVENTABLE ACCIDENTS

I shall first discuss common accidents to the eye in foundries, machine-shops, mills, and in the building trades, domestic, agricultural and military pursuits, which can be greatly lessened by various known means, such as have been applied among iron workers, mechanics or weavers

These accidents include blows from blunt force and wounds of all description — incised, punched, lacerated and contused—occurring from the use of tools or caused by foreign bodies of all kinds, magnetic or non-magnetic, retained or not within the eye Ordinary domestic injuries, in addition to the above, include scratches of the conjunctiva or cornea and wounds from knives, scissors, forks, useless air-guns, fireworks, improperly carried umbrellas, etc

Blows from blunt objects on the eye or its surroundings may cause ecchymosis and swelling of the lids, fracture of the orbit, ecchymosis and hematoma of the conjunctiva or orbit, rupture, concussion or dislocation of the eyeball, rupture or paralysis of the muscles, rupture of or pressure on the optic nerve by hematomas, aneurysms or fractured bones In addition the iris may be torn, the lens dislocated and the various structures within the eye injured The base of the skull may be fractured and traumatic exophthalmos result

Small particles are likely to become lodged in the cornea of workmen of various trades, especially in the iron and steel trades This is common in the eyes of grinders, especially dry grinders who do not use a wet stone, small particles of the metal being ground off the stone or emery-wheel used Close examination, with a magnifying glass or loupe, of such workmen's corneas, often peculiarly insensitive, will usually show large numbers of minute scars, sometimes so numerous as to dull the cornea and affect the vision Fans making air-currents so as to pull or blow the particles away from the eyes are important in many trades, the fans also prevent the inhalation of foreign particles or noxious gases, thus securing better ventilation and benefiting the general health Various shield devices, solid and adjustable, are now on the market They are used generally by the United States Steel Company and are exhibited in the American Museum of Safety in New York of which Dr Tolman is in charge These shields are placed on grinding-wheels, circular saws, lathes and many forms of rapidly revolving machinery, helping to prevent particles flying against the workman's face, and are a safeguard against accidents in case the revolving parts should break Recently much has been done to prevent revolving wheels, etc, from breaking by the use of proper compressible washers, larger than the flanges, making proper application and distribution of pressure to a large space on the side of the straight-sided wheels The flanges are more than half the diameter of the wheel and bear only at their circumference on a flat surface The caliper-rest is adjusted as close to the wheel as possible, lessening the danger of the material being caught between the wheel and the rest Large protecting glasses or the worker's own lenses, if he wears any, are also of much service in preventing particles getting into the eyes, as well as for saving the eyes from more dangerous accidents from large flying particles Glass protectors are also made surrounded by wire gauze as in goggles Unfortunately they get dirty and marked with the frequent blows from flying particles, so that the workmen, unwilling to accept such pressing testimony of their use, too often lay them aside

Injuries from these small flying particles may be slight or serious. Sometimes small particles puncture the coats of the eyeball and unless removed, especially if metal, endanger both eyes by causing sympathetic inflammation, which according to Magnus is the cause of from 4 to 4 5 per cent of total blindness In some cases infection results, giving rise to dangerous ulcers which sometimes destroy partially or wholly the eyesight or even the eyeball Serious accidents to other parts of a workman or even to other workmen sometimes occur, because an operator with a foreign body in his eye cannot see sufficiently to manage machinery The opportunities for slight or severe eye injuries in iron and steel workers are multitudinous and occur in all branches of the work, light or heavy

Many of these accidents occur in chipping, fettling or dressing rough edges of castings, ingots and even large armor-plates These chippings are brittle and sharp and fly about, often bounding from objects which they strike The accidents are caused by one or two strikers hitting a chisel held against the casting by another man Particles are likely to fly not only from the metal struck but also from either end of the chisel or from the hammers of the strikers S C Ayers has pointed out that cheap hammers and chisels of poor quality are frequent causes of eye accidents in mechanics Care is taken in some shops to examine carefully and regularly these tools to prevent accidents Pneumatic chippers are safer Passersby and other workers may be protected by chipping against a wall or a screen covered with canvas or burlap which will hold the flying particles and not reflect them Brick-cleaners should take similar precautions

Burning sparks and flashes are commonly caused from molten metal running into molds, in great or small

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forgings, by hand steam or hydraulic hammers When there is great heat, glass protectors to the eyes are of little service, but good safe protectors of wire gauze covering both eyes and face, especially those with asbestos over mouth and neck, are useful Rusting may be provided against by making the frames of galvanized iron or aluminum wire

Coal-miners are likely to be injured by small particles of coal or splinters from the pick point becoming embedded in the cornea, abrading its surface or cutting it Such wounds are particularly likely to become septic Agriculturists often meet with eye accidents in threshing, chaff-cutting, hedging, in distributing artificial fertilizers and by the entrance into the eye of spears of grains and grasses, twigs and leaves, and from insects and their stings These injuries are usually produced by vegetable substances, straw, beards of wheat, etc, and are likely to become infected Cow-horns, claws and kicks from animals cause many accidents In taking care of some plants special forms of affection result, as ophthalmia among hop-pickers due to entrance of fine, thin hair-like processes from the hop leaves Dusty labor is liable to cause troublesome eye conditions as in sawmills from flying sawdust and knots, at threshings, in handling coal and ashes, in flour-mills and from fine particles of copper off trolley wires, but the eyes can be greatly protected by proper goggles

Stone-masons, grindstone-makers, quarrymen, bricklayers and stone-breakers can partially protect their own eyes by proper protectors and should be more careful to dress their work against some wall where passersby will not be so likely to be injured Wire-drawing, in which great tension is placed on the wire, causes accidents from breaking or slipping of the wire which backlashes and may strike some one In weaving there is great danger of a flying shuttle striking the eye, but many patterns of guards are now on the market to prevent this Some are known as wing guards, consisting of a wire screen or canvas placed between the looms, others provide means to prevent the shuttle from rising The military man and sportsman are subjected to the danger of small and large shot and bullets, shell explosions, sword and bayonet injuries and explosions of various kinds

There are various processes involving exposure to irritating dusts, as to the dust of graphite in the manufacture of stove polish, bronze powder, while bronzing in lithographing, in all processes of grinding, glazing or polishing, and while talc (soapstone) dusting in rubber manufacturing In sorting, dusting, cutting or grinding rags, and in cutting, boring, turning, planing, facing, doming, grinding or polishing pearls or buttons, shell dust is also likely to get into the eyes Everywhere in the air volcanic and meteoric dust is present, the latter consisting of tiny spherical shot-like pellets from 1/200 to 1/500 of an inch in diameter The flinty shells of diatoms, tiny plants, and dust from sandstones and deserts often get into the eyes The pollen of plants as from pine-trees, scales from the wings of butterflies and other insects, and hairs as from caterpillars, also get into the eyes

ACCIDENTS FROM EXPLOSIVES

Accidents occur while high explosives are being handled, as in clay manufacturing quarrying, mining and railroad construction

Blasting in mining, quarrying etc, causes a large number of accidental injuries These accidents are particularly liable to destroy both eyes, removing the earning capacity of the individual and possibly throwing him on the community for support Powder-grains are often embedded in the eyeballs, lids or face Most high explosives, unlike gunpowder, are not exploded by simple ignition but require an exploder Poor fuse or explosives, possibly frozen, with improper loading cause premature blasts or misfires Accidents usually occur from drilling these "missed holes," striking an unexploded piece of explosive, cap packing with a metal instead of a wooden tamping rod, carelessness with cigar ashes, hot candle grease or in handling the explosives Donovan[1] states that blasting injuries with few exceptions result from want of care on the part of the patient, his associates or his predecessors at work Large quantities of explosives, whether solids, liquids or gases, should not be stored in any one place, especially in thickly settled communities Greater care in proper insulation of electric wiring in such regions and the prevention of the possibility of sparks by short-circuiting should be observed Licensing of "powder men" and better government inspection of the manufacture, storage and sale of explosives would be helpful

ACCIDENTS FROM FLYING GLASS

Accidents to the eyes occur from the bursting of locomotive oil- and water-gauges, and bottles and siphons in bottling

Gauges on every description of steam boiler frequently break, injuring by flying pieces of glass, or scalding by the steam or hot water The slowly soluble gauges are worn by the friction of the moving fluids within and may be protected with wire netting or plate-glass protectors open at the back, so that the direction of an explosion may be controlled The chief danger comes when putting in a new glass after one is broken On turning the hot water into the cool glass it suddenly breaks The United States Steel Company has swinging wire protectors that may be placed in front of these gauges until the glass has been warmed and tried, when the protector is swung out of the way so that it can be more readily seen by the engineer at a distance These accidents, occurring to engineers, who require a high degree of visual acuity, greatly lessen their earning capacity and at the time of the accident may endanger many lives and much valuable property

In the manufacture of aerated waters and in bottling beverages of nearly all kinds, the frequent bursting of bottles and siphons is very dangerous to the eyes The bottles are cleaned, filled, corked and wired by machinery and in all the various processes and inspections which are necessary, there is danger of the bottles bursting The Dangerous Trades Committee of Great Britain, in 1896, recommended that all bottlers, wirers, sighters and laborers while at work should be provided with face-guards, masks or veils of wire gauze They also recommended the providing of gauntlets for the arms and the fencing with wire gauze of all machines for bottling, to prevent fragments of bursting bottles striking any workers

ACCIDENTS FROM SCALDS AND FUMES

Accidents somewhat similar to the preceding are caused by scalds or caustics or exposure to irritating gases and fumes as from hot fluids, molten metals, lime or corrosive acids or alkalies entering the eye sac

Scalds or burns usually involve the eyelids, the deeper burns affecting the eye generally result from explosives as in preventable Fourth of July accidents Powder-burns should be treated with hydrogen peroxid,

[1] D The Journal A M A Aug 5 1905 p 387

and Wurdemann then applies for from six to twelve hours 33⅓ per cent papain in glycerin to digest the injured tissue, afterward applying 5 per cent boric or other simple ointment Powder-grains or other foreign bodies in the cornea require the use of a local anesthetic and spud Burns in masons, plasterers and bricklayers caused by lime, especially unslaked lime, calcium oxid, sometimes result in destruction of the cornea and frequently in traumatic pterygia and adhesions between the eyelids and globe and, because of chemical combination with substances in the cornea, produce permanent opacities When unslaked lime gets into the eye it should be wiped out by a dry clean cloth or washed out with liquid petrolatum or castor or olive oil If this is not done at once the lime will soon be slaked by the tears and then large quantities of water can be used to help remove it Besides causing actual destruction, lime and cement have irritating qualities, sometimes occasioning conjunctivitis and even ulceration of the cornea with loss of vision in those who work constantly with these substances There are also various caustics employed, as in the manufacture of chemicals, alkalies and acids

Proper, clearly worded signs, giving warning of the dangers from careless handling of caustics in shops and schools, would lead to greater care being exercised In accidents caused by unslaked lime and certain corrosive fumes, workmen should pour olive or even castor oil (quantities of which should be kept handy in certain trades) into the eye If oil is not quickly obtainable large quantities of water should be used There are certain advantages in the use of water in that the inexperienced find it very difficult to manipulate the slippery lids after the first drop of oil has been used

Ammonia burns should be treated immediately by *profuse irrigations with water, according to* Pichler[2] For workmen compelled to use certain acids or alkalies proper neutralizing washes should be supplied so that fellow-workmen, properly instructed may use them at once After burns of the cornea by acids, Guillery[3] advises bathing the eyes with 0 5 per cent solution of potassium hydrate, and says that the opacities from lime may be partially cleared by the use of a 10 per cent solution of ammonium chlorate with 0 1 per cent tartaric acid For lime-burns Wurdemann advises copious washings with cold water and the use of from 3 to 10 per cent solution of ammonium chlorid, the calcium being dissolved and carried away Any mildly acid solution may be used for recent burns with alkalies Schmidt[4] asserts that corneal burns from acids are likely to cause opacities of the lens Exposure to irritating gases and fumes takes place chiefly in gassing in textile factories, singeing in print works, bleaching and dyeing works and in dipping metals in acid solutions

DISEASES FROM INTENSE LIGHT AND HEAT

Diseases resulting from excessive light or heat are not uncommon among electric welders, steel smelters and in those melting or annealing glass

Metal-polishers and buffers, brightening surfaces which they must closely watch, often suffer with hyperesthesia of the retina This can be relieved by proper lenses or colored glasses Excessive heat and light are encountered in iron and steel works Men can watch a *furnace* until the temperature reaches 2,000 F, but before it rises to 3,000 F, colored glasses should be worn In working with cast iron, from 1,800 to 2,000 F, the men take few precautions, with molten metal, 2,700 to 2,800 F, deep blue glasses are necessary With Bessemer metal, 3,000 to 3,200 F, the process is completed in about twenty minutes and only one man needs to watch the metal, which he does with a spectroscope about 30 feet distant The Siemons process takes ten hours and all the men, wearing colored lenses, make observations frequently If some of these hot furnaces are looked into without lenses it is several minutes before the eye can see ordinary objects again Some men seem to have surprising immunity from bad results in dealing with these white-hot furnaces, others cannot endure them and must change their work Snell doubts the greater frequency of cataract in glass-blowers and iron-workers than in others, although both are subjected to great heat and consequent loss of moisture Herbert Parsons and Marcus Gunn in 1908 visited some of the important glass-works in England to gather statistics of industrial diseases for the framing of the workmen's compensation act They state that bottle-makers have a characteristic form of cataract, typically, a dense, well-defined disk of opacity in the center of the posterior cortex Often slight opacities surround this posterior cortical disk Excessive heat and bright light are said to be the causes but the Germans claim that heat is the most important cause Weyl mentions, besides glass-blowers fire workers, puddlers, blacksmiths, bakers and cooks

Great care is required to avoid very strong light flashes before the eyes, as in short circuits and electric welding In the latter large shields are worn, in the center of which are four alternate layers of blue and red glass Helmets and screens with four or six layers of red and green glass are often used The temperature in electric welding goes as high as 7,000 F, but the question of whether it is the heat or the chemical rays that act so harmfully has not been settled If the eyes catch the light they are affected at once, but chiefly some hours afterward They feel swollen as if filled with burning sand and the pain is usually very severe, the lids are swollen and there is much lacrimation Intense light as from electric and vapor lamps, from exposure to snow or after observing an eclipse, frequently causes a superficial ophthalmia and may affect the lens and retina

Schanz and Stockhausen found that the superficial irritation could be prevented by a screen of euphos glass which absorbs ultraviolet rays McMullen[5] states that this could be done with plain glass which absorbs rays of wave-length less than 300 microns He thinks that opacities in the lens result when the wave-lengths are between 300 or 400 microns, but that the rays of greater length, as well as the short waves, cause the retinal changes Wurdemann says that electric light flashes or lightning may cause cataract and by being focused on the macula destroy the central retinal elements

DISEASES CAUSED BY POISONOUS SUBSTANCES

Diseases result from working in certain poisonous gases and fumes, dusts or substances, bisulphids of carbon, lead, etc

Dinitrobenzol is largely employed in making explosives During the various processes of its manufacture fumes are given off which affect vision These can be lessened by properly covering the mixtures and by the use of fans and exhaust apparatus Respirators and glasses are used The general circulatory and nervous effects are described by Snell,[6] who gives many excellent suggestions for preventing deleterious effects in manufacturing this substance Carbon bisulphid, formerly much used in vulcanizing rubber, caused impaired eyesight, but this process has been so greatly modified that it is now of little importance in causing ocular lesions Toxic amblyopias caused by tobacco, ethyl alcohol and wood alcohol are too well known to require consideration

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[2] Pichler Cauterization of the Eye and Epidermis by Ammonia, Ztschr f Augenh 1010 xxiii 207

[3] Guillery H Chemical and Clinical Investigations on Cauterization of the Cornea Arch f Augenh lxv, 139

[4] Schmidt H Ztschr f Augenh, 1910 xxiii 241

[5] McMullen, W H Ophth. Rev., April 1910

The eye affections formerly attending the manufacture of iodoform have by care been eliminated A few cases of eye involvement have been reported in dye factories from handling the various coal-tar preparations Arsenic from wall-paper, artificial flowers and Paris green, paper hangings and paintings, also when used for medical or cosmetic purposes, according to Casey Wood, has caused various visual disturbances Painters, plumbers, electrotypers, file-cutters and many others through handling lead are likely to get chronic lead-poisoning causing central peripheral affections of sight, various paralyses, retrobulbar neuritis, etc Lead-poisoning is also found among those manufacturing white, yellow, orange and red lead, lead pipe, solder and plumbers' supplies and in cutting metal articles composed of lead or lead and tin, in grinding lead paint, making storage batteries, cleaning or handling printing type and in glazing in pottery establishments Poisonous gases and fumes are found in shoe cement, japanned or patent leather and rubber manufacturing, in which the mixtures containing naphtha are sometimes allowed to remain in uncovered containers and proper ventilation is not insisted on Poisonous gases are also formed in certain lead processes

DISEASES DUE TO PECULIAR OR PROLONGED USE OF THE EYE

Nystagmus in miners is an instance of the diseases found in workers following occupations requiring prolonged and peculiar use of the eyes

Nystagmus in miners, due to their peculiar way of looking at their work, is fully described by Snell, who says that treatment consists in changing the kind of work After relief the miner can return to his work if the head can be kept straight and the eyes are not often turned upward Snell mentions several other occupations which he has thought might cause nystagmus because the eyes were turned directly or obliquely upward

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS STEVENSON AND FORDYCE

DR CHARLES F STOKES, Surgeon General, U S Navy, Washington, D C Our activities in the Navy along the line of occupational hygiene are undertaken entirely to add to military efficiency, our humanitarian interest being subordinated and secondary General sanitation has reached a very satisfactory plane We have, however, grouped together in a battle ship a more varied lot of activities, I think, than will be found elsewhere in the same space There are disabilities attributable to the use of the searchlight, which is illuminated by an arc light, inducing a coagulation in the retinal cells or changes in optic nerves We aim to avert these disabilities by the use of electrician's glass to cut down the intensity of the light, and the use of Hallauer glass to diminish the deleterious effect of the actinic rays In the turrets the gun pointer adjusts or refines the pointing of his gun by means of a telescopic sight We are studying the effects of these telescopic sights on the eyes, and are taking steps to avert disability from this cause There is a menace in the double bottoms of battle ships which has to be taken into account I know of an instance in which two men lost their lives while inspecting double bottoms in a foreign navy A study of the conditions there has led us to believe that they are not due to toxic gases, but rather to a diminished amount of oxygen During battle practice we find that there are conditions in turrets which will have to be remedied otherwise our men will not be so effective as they should be We find that humidity runs rapidly up to saturation that the normal carbon dioxid content of the air runs up to a dangerous point, and we find as well powder gas contaminations in these situations Steps are being taken to avoid these conditions Our activities in some of these situations have gone so far that they are looked on as a great military asset, and as such are to be regarded as military secrets We have been studying the atmospheric conditions in submarines with the hope of being able to sustain life beyond the time it is now possible to do so in the case of disabled submarines The problem here is not so simple as it would appear at first thought It is something more than the generation of oxygen It means the destruction of carbon dioxid, the taking up of humidity and the doing away with battery generations, principally hydrogen and sulphuric acid, and carbon monoxid from back firing of gasoline We have been making systematic and careful observations in the fire rooms of our battle ships, studying the personnel and the chemical atmospheric conditions before, during and after endurance runs We believe that some of the cases of heat exhaustion, or heat prostration, are due to some extent to a gaseous contamination, possibly carbon monoxid

DR WALTON FOREST DUTTON, Carnegie, Pa An occupational disease not very well known is vanadiumism There are only about two reduction plants in the United States, and in those plants the frequency of the disease has run very high The disease will become more prevalent as vanadium products become more generally used They are being used more and more every day, especially in the manufacture of steel in photography and in cloth manufacturing plants where mordants are used The pentoxid is used in photography quite a great deal Vanadium chlorid and peroxid are used as mordants in printing fabrics, the peroxid is used in the manufacture of steel The greatest number of cases of vanadiumism are found in the reduction plants, especially in the men on the mixing floor and in those that work about the crucibles This disease is not well known at the present time, but it will become more familiar to physicians as the use of vanadium products increases An article that appeared in THE JOURNAL, June 3, 1911, p 1648, will probably give a better description of the poison

SOME TYPES OF URETERAL OBSTRUCTION IN WOMEN *

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The type of ureteral obstruction considered in this paper is that due to lesions in the ureter itself, and while tuberculous conditions fall in this category, they are, for the sake of brevity, omitted

The interest for such a study was furnished by the discovery of a number of cases, most of which had been unrecognized and treated for other conditions I feel confident that I have overlooked a number of these for they presented the same symptoms as those in which I have determined beyond doubt the presence of ureteral obstruction The [illegible]very of the first case was more or less [illegible] it so imp[illegible] I have been [illegible] and have [illegible]igh others to make me think it a frequent condition in women

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[6] Snell Brit Med Jour, 1892 L

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In reviewing the reported cases I find that most of them give histories of long-standing trouble, and marked kidney and ureteral changes above the obstruction In other words, they had remained unrecognized and untreated until urgent symptoms demanded operation In a large number of the patients operated on, the operation was exploratory, for no definite diagnosis had been made

In explanation of the etiology of this condition, congenital malformation is given as the most frequent cause Bottomley,[1] who reviews the literature and abstracts the cases reported to date, regards the condition as congenital, but some of the histories read much as if the obstruction were acquired and of inflammatory origin J Verhoogen and A deGraeuwe[2] are of the opinion that most of these strictures are due to congenital defects that become symptom-producing on the addition of a secondary cause, and that infection is the chief one The number of cases seen in the individuals possessing no other apparent congenital defect leads one to suppose that too much blame has been placed on congenital abnormalities, and that some other cause, or causes, must be at fault

In a study of the histories of my cases I am led to assume that infection plays the important part in the production of ureteral stricture Acute hematogenous infections of the kidneys from infections arising from wounds, furuncles, in the course of infectious diseases, especially influenza, tonsillitis† and typhoid, intestinal disturbances and operations on the intestinal canal, etc, are rather frequent They often persist as a pyelitis, ureteritis or a secondary cystitis The long-continued inflammation then results in an infiltration of the ureter with consequent contraction and the formation of a stricture This represents obstructions from infections of the descending type Sugimura[3] studied the lower end of the ureters in the bodies of twenty-five patients who had had cystitis but died of other causes, and in all found changes of an inflammatory type in the submucosa and muscularis, he expressed the opinion that the infection extended through the lymphatics and not along the mucosa

Of the infecting organisms the colon bacillus has been given first place, and most authorities consider that in this type the infection descends from the kidney Just how important a rôle is played by the gonococcus is still in dispute but when this is the causative factor the path is generally ascending Garceau[4] believes it more frequently to blame than does Kelly and suspects it strongly in cases of bilateral ureteritis or stricture

The seats of stricture are, as a rule at the points of anatomic narrowing, with the ones at the vesical end and just below the pelvis as the most frequent, stricture at the point of crossing of the pelvic brim being rare Kelly[5] claims to have seen only once stricture of the upper end, but this does not agree with my experience or with the literature John A Sampson[6] reports a case of stricture of the lower end of the ureter with a valve-like formation at the pelvic brim that he explains as being due to the giving way of the ureteral sheath at that point with a hernial protrusion of the ureter I have radiographs of two cases that show much the same picture as that in the diagram illustrating his case

Necker[7] exhibited before the Deutsche Gesellschaft fur Urologie at the congress in Vienna in September, 1911 some pyelograms of cases of pyelitis, all showing some dilatation of the renal pelvis, and in explanation said that they were cases of ureteral obstruction with secondary infected hydronephrosis I have some similar radiographs, but am inclined to think that the infection existed first and is the cause of the obstruction and the dilated kidney pelvis

S Mirabeau[8, 9] has written two excellent articles on ureteral obstruction He regards many such cases as due to infections of the lower end of the ureter, and strongly emphasizes the fact that in these the first attacks of renal pain are apt to be encountered at the menstrual period, owing to the pelvic congestion causing a swelling of the already inflamed ureteral mucosa and consequent obstruction

Most of these stricture cases are of long standing and slow progress and the first symptoms may be those of pyelitis, ureteritis or cystitis Unless the obstruction is great it may be some time before the ureter and the renal pelvis become dilated, and the kidney shows pressure changes If the narrowing is at the vesical end, there is ureteral dilatation before the renal pelvis is enlarged If at the upper end the pelvis and the calices become enlarged, and even in the earlier stages, as shown in the pyelograms, it is seen that the dilatation of the pelvis occurs in a downward direction As the ureter remains fixed, it first appears that it comes from the pelvis at a right angle, later it is seen in the so-called high origin, which has been given as a cause of obstruction instead of its effect As this becomes more marked there is seen the formation of a spur composed of the outer wall of the ureter and the inner wall of the pelvis, and this later acts as a valve I have in my possession the radiogram of a case that presented an enormously enlarged ureteral orifice as a result of the increased bladder-pressure from the tenesmus of a severe cystitis the ureter and the kidney pelvis were likewise dilated, and the relation of the ureter and the kidney pelvis are such as that just described This is detailed to show that the high insertion of the ureter and the formation of the spur or valve is the result of the pelvic dilatation According to Kelly,[5] these strictures involve from a few millimeters to one or more centimeters of the length of the ureter, and the rule is that they are apt to be extensive

SYMPTOMS

Usually there is a history of an antecedent pyelitis, ureteritis or cystitis, which may have occurred long before the symptoms of ureteral obstruction or have continued until the time the stricture symptoms appeared Garceau[4] has written an extensive article on ureteritis in which he states that besides pain along the course of the ureter, more especially at the pelvic brim, and frequency of urination, the presence of a large number of epithelial cells, singly and in plates, from the ureter is characteristic To obtain these without traumatism from ureteral catheterization he advises collection of the urine through a Kelly speculum with an oblique end and the patient in the knee-chest posture The pain of the ureteritis is often confounded with that of appendicitis and adnexal trouble, and many patients have been operated on for these conditions without relief of symptoms

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[1] Bottomley Ann Surg November 1910

[2] Verhoogen J and de Graeuwe A Ztschr f Urol 1911 p 621

† Hunner Guy L The Journal A M A April 1 1911 p 937

Sugimura Virchows Arch f path Anat October 1911

[4] Garceau Am Jour Med Sc February 1903 p 284

[5] Kelly H A The Journal A M A Aug 16 1902 p 363

[6] Sampson John A Ann Surg December 1907

[7] Necker Ztschr f Urol 1912 No 3 vi 464

[8] Mirabeau S Ztschr f Gynäk Urol, i No 1

[9] Mirabeau S Ztschr f Urol 1912, vi No 1

In fact, it is often only after such operation that a true insight into the condition is found in looking for other causes for the patient's symptoms

After the definite formation of a stricture the symptoms become those of intermittent hydronephrosis, and are much the same as those caused by the sudden blocking of the ureter by stone, or kinking I think that the attacks are more severe, show a greater tendency toward periodicity, and that the symptoms are less noticeable between attacks than in cases in which the obstruction occurs from pressure of a tumor mass, the pregnant uterus or the extension of carcinoma

In most of the cases I have seen the symptoms have persisted for some time, in a few for many years At first the attacks are slight and far between, but in the course of time the intervals lessen, the attacks become more severe and last longer Exposure to cold, the drinking of water to excess, and the influence of menstruation have been given as determining factors of attacks, but it is only in regard to the last-named factor that I have noted any relation This is a point described by Mirabeau[8] I have had four patients who came to me for renal pain at the menstrual period, and while in only one did I demonstrate an obstruction with consequent dilatation of the ureter, I believe that these are cases of ureteritis that involve the lower end of the ureter and that sometimes they may progress to the formation of strictures

The pain of an attack is generally in the renal region, or may be referred anteriorly over the gall-bladder or the appendix It frequently comes without warning, is sudden, severe and often attended with nausea vomiting and eructation of gas There may or may not be bladder disturbances Oliguria during an attack with polyuria following, is often observed Chills and temperature depend on the presence of infection

The urine may show pus, small quantities of blood after an attack, casts from the nephritis that is often associated with marked ureteral obstruction, or as often is the case, the examination may be entirely negative

Even in moderate grades of hydronephrosis the kidney may show marked changes from pressure atrophy and a great falling off in its functional capacity In only three cases have we tested the functional capacity and in each of these it has been greatly decreased One was particularly instructive, it was that of a patient with only one kidney and a stricture of its ureter Unless the ureter is dilated to No 14 F every two weeks she has attacks of intermittent hydronephrosis.

Just previous to an attack her urine will be as low as eight or ten ounces and phenolsulphonephthalein 10 per cent in one and one-half hours with marked headaches and blindness Following dilatation the amount of urine is increased to 25 or 27 ounces and the phenolsulphonepthalein to 35 per cent in one and one-half hours This gradually falls as the stricture contracts, and the amount of urine decreases

While this condition may be suspected from the symptoms and before the appearance of renal tumor, we are dependent on cystoscopy, ureteral catheterization and radiography of the renal pelvis and the ureter after the injection of substances more or less dense than the surrounding structures. With the present methods of examination, especially pyelography, we should be able in practically all cases to make our diagnosis before the destructive kidney changes have become irreparable

Deficient kidney function may sometimes be determined on the affected side In attempting to detect strictures with the ureteral catheter we are often disappointed, for a stricture sufficient to cause serious trouble may not be felt with the smaller sizes and in the early stages the amount of dilatation and the consequent residual urine may not be enough to give a proper appreciation of the nature of the trouble The more extensive the stricture, the greater the dilatation above, the greater the value of the ureter catheter In the differential diagnosis of abdominal pains I feel that the pain caused by distending the kidney by injection through a ureteral catheter, if the same as that originally complained of, is most valuable But it only shows the probability of the lesion being in the urinary tract and does not determine the location and character of the trouble

In pyelography, as first suggested by Voelker and popularized in this country by Braasch, I believe that we have a certain means of diagnosing these cases, and in the early stages With this a graphic picture is obtained not only of the location of the stricture but of its extent, which makes it possible to form an opinion of the damage that is present above the stricture Without it I would have overlooked most of the cases that I have seen

Stanton[10] has recently written an article that points out more strongly than anything I have seen the necessity of careful examination of the urinary organs The stimulus for this was the number of cases seen at autopsy of marked kidney and ureteral lesions that could have been diagnosed during life, but which were not The records of fifteen general hospitals were then studied, and in those in which cystoscopy was used only when strongly indicated there was a percentage of 1 of operable cases of kidney and ureteral lesions Where cystoscopy with ureteral catheterization and pyelography, was frequent, this same percentage was 2

CASE REPORTS

Case 1—The patient, Mrs M, aged 65, was referred by Dr Madge McGuiness She had one child and one abortion The menstrual history was uneventful Previous history was negative Twelve years ago the patient began to have attacks of pain in the right renal region, associated with nausea, vomiting and the eructation of much gas For the first four years they came every six months and lasted twenty four hours Since then the attacks have increased in severity and frequency and for the last six weeks have come every six days, are of forty-eight hours' duration, agonizing and are not relieved by half grain doses of morphin at three hour intervals Many examinations of the urine showed no pus, no blood a few hyaline casts and many epithelial cells The specific gravity has ranged from 1002 to 1010

Examination—Cystoscopy showed nothing abnormal in the bladder Both ureters were catheterized, urine of low specific gravity with many epithelial cells and few hyaline casts was obtained from the right, that from the left was darker, of higher specific gravity and contained no abnormal structures Six mg of phenolsulphonepthalein were injected into the deltoid and appeared in the urine from the left ureter in ten minutes, but there was not a trace from the right after a period of twenty five minutes The catheters were both withdrawn and the urine collected from the bladder after two hours and mixed with that from the left kidney, the total amount was 35 per cent

Operation—March 23, a week after the examination, Dr Gertrude Kelly cut down on the right kidney, which she found somewhat prolapsed with many surrounding adhesions The kidney appeared as a tense cystic mass, with ureter coming off from the upper pole, and adherent to the renal pelvis An aberrant blood vessel was found running outward to the lower pole of the kidney, behind the ureter Nephrectomy was done Examination of the kidney shows that the renal pelvis had been dilated to the capacity of 45 c c, that the ureter was attached to the upper pole, was adherent to the pelvis, and that the lumen just allowed the passage of a small silver probe The renal structure showed pressure atrophy and is only 3/8 inch thick

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[10] Stanton, Edwin McDonald The Journal A M A March 16 1912, p. 735

Pathologic Report—By Dr John E Welch "Sections through the cortex of the kidney show extensive degeneration of the tubular epithelium, and atrophy of the tubules The interstitial connective tissue shows marked hyperplasia, and over large areas completely replaces the tubules Here and there are areas of round cell infiltration, indicating an active inflammatory process The capsules of Bowman are very much thickened The glomeruli are atrophied and some of them are completely replaced by fibrous tissue The vessels are congested and the larger ones show marked thickening of all the coats There are numerous hyaline casts present in the collecting tubules and in places in some of the tubules of the cortex Sections through the pelvis show hypertrophy of the muscle elements, marked increase in the fibrous tissue, increase in the number of blood vessels and a slight infiltration of the whole wall by an exudate of leukocytes and more or less lymph The epithelium shows extensive desquamation Sections through the ureter show slight desquamation of the epithelial cells only Diagnosis Chronic diffuse nephritis and pyelitis"

Recovery was uneventful, the patient has regained her health and has had no more pain

CASE 2—The patient, Mrs S A K, aged 50, had an uneventful menstrual history with menopause at 47 She has four children, the oldest aged 22, and the youngest 9 years There was one spontaneous abortion at the third month fifteen years ago, but no subsequent trouble Twenty years ago she had some vaginal operation, and, following this, for two months, vesical tenesmus at the end of urination Five years later she had sudden attacks of pain in the right renal region radiating upward to the shoulder and downward along he course of the ureter These attacks lasted an hour and t first came on every three months, for a time she would have one on each successive day for three In the succeeding years the attacks became more frequent and the intervals shorter These attacks were not related to menstruation, nor did there seem to be any cause for them There were no bladder disturbances or changes in the amount of urine voided As a rule, the attacks came in the afternoon, though she has a number of times been wakened from a sound sleep by the pain

Examination—When first seen by me she was having the attacks every four or five weeks (June, 1911) She had had an operation in November, 1910, for gall stones and appendicitis with no change in her condition The urine was normal and the bladder showed no change The right kidney pelvis and the ureter were injected with 15 per cent collargol and radiographs were made that showed moderate dilatation of the renal pelvis, and dilatation of the ureter, with obstruction at the vesical end

Operation—A ureterovesical anastomosis was made, but failed For eight days the urine drained from the ureter through the vagina, which had been opened for safety drainage The ureter had pulled away from the bladder, but the urine from the right side emptied into the bladder through a fistulous tract extending from the end of the ureter to the bladder Two months after the operation the patient began to have pain constantly in the right side and the urine contained a large amount of pus The right ureter could not be catheterized on account of obstruction and tortuosity of the fistula As the patient would not permit another plastic operation on the ureter, the right kidney was removed on account of the existing suppurative pyelitis

Course—After this the patient did well until symptoms similar to those existing before the first operation arose in connection with the left side Since two months after the nephrectomy she has had very frequent attacks of the intermittent hydronephrosis unless obviated by the frequent dilatation of the left ureter It has been found necessary to dilate it with elastic bougies to 14 French every two weeks to prevent attacks Right after a dilatation the output of urine in twenty four hours will be about 25 ounces, and this becomes less and less and just before an attack will be near 10 I have made several phenolphthalein estimations at different times, and find that just after an attack about 38 per cent is eliminated in one and a half hours, and when an attack is imminent the output for the same time will be 10 per cent, this corresponding with the patient's elimination of urine and her general condition This ureter shows no tendency to remain dilated, and it is possible that a ureterovesical anastomosis will have to be done, or the ureter implanted on the skin if the collargol radiograph should show that such an operation as the first mentioned is impracticable

CASE 3—D H, aged 29, was referred by Dr M L Chard Her previous and menstrual histories were negative She had been married nine years and had one child 7 years old She was in good health until one year ago when she began to have attacks of pain in the right side, with nausea, but no vomiting She was operated on for appendicitis, but was not relieved, and in five months was again admitted to hospital with a history of frequent attacks of agonizing pain in the right upper quadrant of abdomen During the attacks she would fall to the floor and roll in pain Exploratory laparotomy showed stomach, gall bladder and cecal region free of any abnormalities Condition continued unimproved and now attacks come nearly every night

The kidney pelvis and ureter were filled with 40 per cent argyrol and radiographed There was seen a dilatation of the renal pelvis and of the ureter, with the point of obstruction at the vesical end The pain produced by the injection was the same as that complained of in her attacks There was no resistance felt to the passage of the No 6 ureteral catheter Patient refused to have anything done and went abroad

CASE 4—Sister F, aged 32, had a negative menstrual and other previous history The present trouble started one and a half years ago with pain in the right renal region radiating down the course of the ureter, associated with nausea, vomiting and eructation of gas The attacks came in the beginning at intervals of two or three months, and lasted two or three hours In the course of time, the intervals lessened and the attacks became more severe, at the time of examination they came every ten days, and lasted two or three days There was no urinary disturbance, though the patient had some increase in the amount of urine following an attack

Examination—The urine was negative Patient had lost much in weight and strength in the past few months Radiography of the argyrol injected into the renal pelvis and ureter showed some dilatation of the renal pelvis and an annular stricture of the ureter ¾ inch below the renal pelvis, opposite the tip of the transverse process of the third lumbar vertebra The injection gave the patient much pain of the same character as that complained of in her attacks, which lasted three days and was associated with moderate temperature

Operation—A plastic operation on the stricture was planned, but could not be carried out, so the kidney was removed The specimen showed the condition as diagnosed from the radiograph Two weeks after the nephrectomy the patient had an acute attack of appendicitis, in which the symptoms were not the same as those complained of in her previous attacks of pain, and the appendix, showing chronic catarrhal thickening, was removed Since these operations the patient has been relieved of her trouble and has gained much in general health and strength

CASE 5—Mrs W T, aged 40, was referred by Dr C C Guion, of New Rochelle Menstrual history was negative She has been married eighteen years and has one child 17 years old There were two spontaneous abortions at three months, the last twelve years ago Then she flowed for two weeks and was curetted, no trouble resulting After childbirth the patient got up early, and complained of pain in the left side of the back—lumbar region This did not trouble her much until five years ago when she began to have attacks of pain in the left renal region, associated with chills and fever These would last two days to a week During this time she noticed that the urine was cloudy, and often bloody She has had to get up five or six times at night to urinate, but for the past two or three months only twice Two weeks ago (history taken March 2, 1912) the patient passed some gravel She has been in bed for the past week on account of pain, chills, fever and sweats

Examination—The voided urine shows many red blood cells, few pus cells, 0 2 per cent. albumin (Esbach) and no casts Cystoscopy shows mild catarrhal cystitis, with marked redness around left ureteral orifice Both ureters were catheterized Urine from the left kidney showed moderate amount of pus and 0 2 per cent albumin, that from the right, numerous red blood cells and 0 1 per cent albumin Phenolsulphonephthalein, 0 6 mg, was injected, 25 per cent was eliminated in one hour from the right kidney, none from the left in the same time Radiograms of entire urinary tract showed two large stones in the pelvis of the right kidney

March 7 the left ureter was catheterized to the kidney pelvis, this second examination being done on account of the absence of the phenolsulphonepthalein, and 300 c c of urine collected in steady stream This relieved the patient of her pain and she felt better

An attempt was made later to pass a catheter into the renal (left) pelvis, inject argyrol, and make a radiograph, but an obstruction was encountered just below the renal pelvis that could not be overcome

Operation—March 22, through oblique lumbar incision, two large stones were removed from the right kidney through incision into posterior surface of pelvis The kidney was about two and a half times normal size, and white No attempt was made to close the incision in the pelvis A cigarette drain and layer closure were employed There was drainage through the lumbar wound for eighty hours, the drain being removed at the end of seventy two During the time the right kidney drained on the skin the daily amount of bladder urine was 12 ounces, after that 70 to 90 On the third day the patient became much nauseated, the next day restless and irrational, the next comatose and died uremic on the sixth No autopsy was allowed Had we been able to make a pyelograph more of the nature of the obstruction in the left ureter could have been determined

Case 6—Miss B, aged 50, was referred by Dr Arthur Booth Eighteen years ago after an attack of tonsilitis the patient had acute appendicitis, was sick two weeks and was treated radically After this she was much troubled with flatulency and obscure pains in the right upper portion of abdomen and right shoulder blade The patient was seen in 1900 by the late Dr Tilden Brown, who thought that she had a left renal tumor, the kidney could, under anesthesia, be displaced downward as low as the umbilicus In 1906, the chronically thickened appendix was removed, but nothing was done to the kidney as the patient took the anesthetic badly She was relieved of the flatulency and the pains in the upper right abdomen

A year previous to her operation for appendicitis she began to have frequency of urination, and, at times, bladder tenesmus, with occasional attacks of pain in both renal regions Since the operation, the right sided pain has almost entirely disappeared, but she is much troubled with almost constant pain over the course of the left ureter, lower half and frequent attacks of renal pain The patient voids urine every two hours during the day and gets up five or six times at night The examination of the urine has usually been negative, though on some occasions a small amount of pus and a few epithelial cells have been found

Examination—When first seen by me, April 2, 1912, the left kidney, not enlarged, could be displaced downward so that the upper pole was two fingers' breadth below the costal margin in the anterior axillary line, it could not be replaced entirely Cystoscopy showed slight general vesical hyperemia, most marked around left ureteral orifice The bladder urine showed few pus cells and few epithelial cells Collargol radiogram showed some dilatation of the left renal pelvis, the left ureter and an obstruction for a short distance above the vesical orifice The pain caused by the distention is similar to that she has during her attacks

On account of the reaction to instrumentation no attempt has been made to dilate this obstruction but efforts have been made to better the bladder condition by the use of argyrol and nitrate of silver bladder washings On two occasions 1 7,500 solutions have caused her renal pain, this has been noted in two other similar cases A nephropexy and a ureterovesical anastomosis above the stricture are contemplated

Case 7—M L. aged 30, a native of the West Indies, was referred by Dr Edward Quintard The patient has had malaria for a number of summers until the past two years She has three children, the oldest weighed 11½ pounds, difficult instrumental delivery There were two spontaneous abortions at three months but no subsequent trouble Wassermann and von Pirquet were positive

Examination—There had been no previous attacks of the present trouble Three weeks prior to admission to Post Graduate Hospital the patient began to have pain in the right upper quadrant of the abdomen which was almost constant in character A tender mass was to be felt just below the free border of the ribs in the mammary line, which was slightly movable with respiration There was tympany in front of this mass after gaseous inflation of the colon Temperature was 100 to 101 F Few pus cells were found in the urine from the right kidney No tubercle bacilli were found and there was no bladder disturbance

Treatment—The right ureter was catheterized and 40 per cent argyrol injected Radiograph showed some dilatation of the renal pelvis and a narrowing of the ureter at the level of the transverse process of the second lumbar vertebra The ureter comes off at nearly a right angle to the renal pelvis The character of the pain produced by the injection was the same as that complained of After the immediate discomfort of the examination the patient was better and relieved of her symptoms This case is considered as one of pyelitis with obstruction, the relief may have been due to the argyrol the dilatation of the narrowed ureter, or the combined effect

Case 8—S K, single, aged 22, was referred from Dr Edward Quintard's Medical Service at the Post Graduate Hospital Previous and menstrual histories were negative, von Pirquet was positive Trouble began twelve years ago with pain in the upper right quadrant of the abdomen, the pain being also referred to the right shoulder and scapula There was no icterus at any time The pain had no relation to eating Attacks at first came every few months, but of late had been every week Duration was one to ten hours There was no hematuria The urine showed many pus cells, but no tubercle bacilli could be found The right renal pelvis was injected with argyrol and radiographs were made, which showed some slight dilatation of the renal pelvis with a narrowing of the ureter just as it leaves the pelvis The ureter came off at nearly a right angle The injection caused pain similar to that complained of in her attacks Following this there was relief of symptoms, which we attempt to explain as in Case 7

CONCLUSIONS

Stricture of the ureter is more frequent than generally supposed, and is often diagnosticated as other trouble, especially when on the right side It is slow, progressive and leads to serious renal trouble The most frequent causes are of inflammatory origin, and the infection may be descending or ascending

In pyelography we have our most sure and accurate method of diagnosis, even in the early stages

393 West End Avenue

ABSTRACT OF DISCUSSION

Dr Guy L. Hunner, Baltimore It is very important in dealing with such an important organ as the ureter that we should know the original cause of the disease It may do little good to treat the local condi [illegible] in the ureter itself without treating its ca [illegible] especially interested i [illegible] tioned by Dr Furni [illegible] narrowing with an infection of the urinary tract with the result of a stricture at one of these congenitally narrow places That can be granted if all ureters are congenitally malformed, but we are not ready to grant this If, however, there is an inflammatory tract or stone in the ureter or anything to cause trauma at one of the points of narrowing the result is stricture at that point

Dr Furniss has drawn attention to the relative frequency with which we see acute kidney infection following disease elsewhere—following operation, furunculosis, typhoid fever or acute infectious diseases, tonsillitis, etc —and as I understand him, he says that most of the ureteral strictures are secondary to these infectious diseases elsewhere in the body I agree with him I wish to go further and state that some of these ureteral conditions occur without any infection, that is to say, they are lymphatic toxemias They come from some distant focus in the body In December, 1910, I showed before the Southern Gynecological and Obstetrical Association a series of cases of urethritis and ureteritis due to tonsillitis and I asked the members to bear the matter in mind and either disprove or prove my position Since then I have had a sufficient number of these cases of chronic ureteritis to feel thoroughly convinced that my standpoint in that matter is right, and that a large number of these cases of stricture of the ureter come from toxins of the tonsils Another thing rather pointing to the truth of that is the fact that a large percentage of cases are infected by the *Staphylococcus aureus* rather than by the colon bacillus, although the colon bacillus causes more than one half of the infections of the urinary tract.

We do not know much about the treatment No one has had enough experience yet to be able to state anything positive about it Cases of stricture near the lower end of the ureter seem to have a tendency to have a long section of the ureter strictured, whereas, near the pelvic brim and nearer the kidney, the strictures are likely to be annular This I think we shall be able to control by using bulb catheters and overstretching the strictures I am getting some positive cures of these annular strictures simply by that treatment With those having the long section involved near the bladder wall I believe it is necessary to go in extraperitoneally, cut them off above the seat of stricture and implant in the bladder I have not had much success in dealing with them Some can be dilated, but not all I had one just last week and the only thing I could get in was a little probe-like searcher After getting by the stricture, to get out again I had to bend the handle of my probe and push the Kelly clamp off over the probe and with one finger in the vagina pull as hard as I could The stricture was so dense that it had grasped the end of the probe Dilatation gives little hope We shall have to cut the ureter off and place it either in the bladder or in the kidney

Dr H D Furniss New York In my cases of stricture of the lower end of the ureter there has been little if any obstruction to the passage of small catheters, and most of them were diagnosticated by radiography after the injection of collargol or argyrol Otherwise we would have overlooked them except in the cases in which there was marked dilatation of the ureter above the stricture and retention of an appreciable amount of urine Cases of renal pain with purulent urine following a few days after operation, I explain as being due to infection of the renal pelvis and ureter, with consequent swelling of the ureteral mucosa and obstruction thereby to the ureter In these, pelvic lavage with silver nitrate has been successfully used As Dr Hunner states, obstruction of the lower end of the ureter does occur with pus free urine I think that the majority of these cases are in all probability due to lymphatic involvement of the vesical end of the ureter from a cystitis Dilatation of the lower end of the ureter is easy, but as Dr Hunner says, the results are unsatisfactory as the ureter will not remain dilated I have a patient whose ureter requires dilatation every two weeks When I return I shall inject argyrol, and make a radiogram to determine the exact site of the stricture and the amount of dilatation above In this case I contemplate making a ureterovesical anastomosis on account of the unsatisfactory results from dilatation The pain of the dilatation itself is not severe, but that following three hours afterward and lasting three or four hours is, this is, I think, due to the obstruction of the ureter following the trauma During the very painful period there is oliguria, which is followed later by a relative polyuria Ureteral obstruction in women is common, and pyelography is the most accurate method of diagnosis

A CASE OF SUSPECTED PULMONARY BLASTOMYCOSIS

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A Chinese woman, aged 36, came to the dispensary of the Neerbosch Hospital in March She was so weak and short of breath that she was unable to walk alone Our first impression was that this was a far advanced case of tuberculosis The patient was emaciated, anemic and very short of breath, she coughed almost constantly and raised large quantities of mucopurulent sputum Both apices and the left lung were normal There was an area of dulness about 5 cm in diameter just above the right mammary region in the nipple line Over this area were heard râles of nearly every description Patient complained of no pain, but of weakness and an inability to sleep on the affected side on account of coughing We examined the sputum as many as twenty times for tubercle bacilli but with constant negative results We noticed, however, the constancy of certain spore like bodies with double refractile capsules and granules This led us to suspect blastomycosis Up to this time, a period of about ten days, she had been taking emulsion of cod liver oil and hypophosphites with guaiacol Her fever ran from 101 to 103 and was more or less constant, except that there were evening remissions instead of the usual morning remissions The pulse was 112 and rather weak Under the cod liver oil and guaiacol treatment there was no change After we had decided that we were not dealing with tuberculosis but possibly with blastomycosis, we used copper sulphate as directed by Bevan[1] (quarter grain doses, three times a day) and the result was marvelous After twenty four hours the temperature had dropped to 99, and in three days it was normal in the evening, with a fraction of a rise in the morning, but within a week both pulse and temperature were normal, the constant cough was much relieved, and the quantity of sputum greatly reduced Its character, however, remained much the same The patient was soon able to sleep on the affected side and gained in weight and strength very rapidly We are sorry we have to report that some cough still continues and that we still find the blastomycetes in the sputum Nevertheless the patient has gained so much in the three months of treatment that she is able to walk four miles to and from the dispensary

Castellani[2] reports several cases which he calls bronchomycosis, the description of which answers quite closely to our own, but not entirely He claims cures by the use of potassium iodid in large doses three times a day

We have had ten cases of what seemed at first sight like tuberculosis, in the last three months, but the microscope showed tuberculosis in four cases, blastomycosis in five and one negative It would seem therefore that blastomycosis is not rare in China

The chief remedial agent employed successfully, says Ormsby,[1] is potassium iodid, first advised by Bevan The drug nearly always produces marked results and in some cases entirely cures the disease Doses as large as 600 grains a day are often required It should be given in large dilution and should be continued for a long time or until no renewed activity occurs after its withdrawal More recently Bevan has advised copper sulphate In our opinion these drugs are only palliative, and as yet we have no cure

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[1] Ormsby Oliver Blastomycosis in Lexer and Bevan s General Surgery 1908 p 376 We refer those interested in the subject to an account of the pathology and history of the disease and a very complete bibliography appearing at the end of that article

[2] Castellani Philippine Jour of Sci July 1910

THE RELATIVE VALUE OF THE "NATURAL" AND THE SYNTHETIC SALICYLATES

A STUDY OF THE LITERATURE*

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There is at present a fairly wide-spread belief that the salicylic acid which is derived from the natural oil of wintergreen or sweet birch, and the sodium salt of this acid are to be preferred to the corresponding synthetic preparations. This preference seems to be founded mainly on two claims. The first is that the "natural" or "true" salicylates are less toxic than the artificial, the second, that they are more active as antirheumatic agents. The adherents of these views are very firm in their convictions, and, what is more, certain manufacturers make very positive statements regarding the relative superiority of the former compounds. On the other side of the question there are many who are equally certain that no such difference exists. A third class of physicians, those who are either neutral or who do not take a positive stand with either side, is probably greater than the two partisan groups combined.

If there is no difference in the toxicity or in the activity of the two classes of salicylates it is of considerable importance to know it, for the "natural" variety is about sixteen times as costly as the artificial. On the other hand, if the artificial is really more toxic or less active, or both, as is strongly urged, we would be unjustified in depriving our patients of the advantages of the superior drug or in subjecting them to unnecessary risk of unfavorable effects from the more toxic merely on the ground of economic difference. It therefore becomes an important matter to determine the validity of the several conflicting claims, if such be possible. The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken the solution of this question and will approach it from several points of view. The results of biologic investigation have already been published.[1] The results of chemical examinations and of therapeutic tests are forthcoming, and in this paper I shall attempt to review all of the evidence bearing on the question which can be found in the literature.

In the presentation of the results of my searches I shall endeavor to follow, as nearly as possible, a chronologic order, and for the most part I shall make use of literal quotations from the several papers, thus letting their authors speak for themselves and avoiding the danger of misconstruing their statements.

In 1874 Kolbe first described a means of manufacturing salicylic acid artificially from phenol. In 1876 Maclagan[2] suggested the use of salicin in the treatment of rheumatism, based on the conception that rheumatism was, as malaria was then supposed to be, miasmatic in origin, and that salicin, like cinchona, was a natural remedy, found growing in the regions in which rheumatism was most prevalent. From about 1875 on, the literature on the beneficial action of one or another of the salicyl preparations in rheumatism grew apace and along with the favorable reports came the records of untoward symptoms resulting from the new therapy, but it is not until 1877 that one finds any definite comparison of the artificial acid with the acid derived from the oil of wintergreen or from salicin.

In that year Williams[3] read a paper on the impurities of the artificial acid, which he ascribed to the presence of impurities in the parent phenol. He described a method by which he was able to purify the artificial acid so completely as to obtain an acid identical in every way with the natural product. He thought that the impurity was probably a derivative of cresol (cresylic acid) and of this he remarked:

> Respecting the medicinal properties of this acid I can say nothing as yet, it may be, like paroxybenzoic acid, inert, and would then be simply a diluent of the salicylic acid, or it may be active as an antiseptic, or it may be mischievous. ... whatever it be there can, I think, be no doubt that the artificial salicylic acid at present used for medical purposes is not so pure or so uniform as is desirable, and that it should be more highly purified and freed from this second acid I have described before it or its salts are used in medicine.

In the discussion[4] of Williams' paper Professor Redwood is cited as saying:

> Mr. Williams has done a great deal toward affording the explanation of a fact which many had been aware of, namely, that the artificial salicylic acid sometimes failed in producing the effects anticipated, such as would be produced by the natural acid.

Mr. Plowman confirmed fully the statement that artificial salicylic acid frequently caused considerable derangement to the system. It had been given in St. Thomas' Hospital in doses of 20 grains every two hours and the results had frequently been to cause delirium. He was uncertain, however, whether the acid used was artificial or not, but from the price paid for it he thought that it was probably artificial.

In 1879, 1880, 1882 and 1888, the *Lancet* contained papers by Maclagan defending his stand with regard to the superior antirheumatic action of the natural salicylates as exemplified by salicin. His contentions were strengthened by occasional reports of the unfavorable effects of the impure artificial acid and its salts and it would seem that his views which referred the action of salicin to its presumed "natural relation" to rheumatism gained wide support and are, perhaps, to day at the bottom of a similar idea regarding the difference between the actions of the "natural" salicylates and those of the artificial.

Following Williams, the next paper to appear bearing on the question was one by Fowler[5] in 1881 from which I will quote:

> In thirty-nine cases treated with pure salicylic acid [natural] toxic symptoms were present in ten only. In five there was deafness, in two deafness and tinnitus, in three deafness, tinnitus and vomiting. ... As regards the relief from pain, subsidence of fever and liability to relapse, the pure acid does not appear to act with greater benefit than the ordinary [artificial] acid. ... The advantages claimed for the pure acid are that it rarely produces vomiting and never delirium.

He also remarks that investigations which are going on show an impurity in the artificial acid, not, as yet, identified.

Fowler's observations are too few to permit of very definite deductions but it is to be noticed that his short series showed vomiting in 7.5 per cent. of the cases

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* This investigation was undertaken at the suggestion of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association.

* From the Department of Pharmacology of Cornell University Medical College.

[1] Waddell: Comparative Investigation of the Effects and Toxicity of Sodium Salicylates of Natural and Synthetic Origin, Arch. Int. Med., December, 1911, p. 784.

[2] Maclagan: Brit. Med. Jour., 1876, i, 627.

[3] Williams: Pharm. Jour. and Tr., 1877-78, Series 3, viii, 785.

[4] Pharm. Jour. and Tr., 1877-78, viii, 798.

[5] Fowler: Lancet, London, 1881, ii, 1118.

This does not agree altogether with his further statement that one of the advantages claimed is that the "true" acid, "rarely produces vomiting" This percentage may have been a "rare occurrence" of the symptom as compared with what was seen after the use of the artificial acid which was then on the market His evidence in favor of the "true" acid is, then, not very strong, for he finds no difference in the antirheumatic powers of the "true" and the artificial acids, and his incidence of vomiting from the "natural" is by no means low

Broadbent[6] expresses the belief that when toxic symptoms arise they are due to an impurity in the artificial drug He says

> A question which we have not been able to resolve—indeed, I do not know that the material exists for its determination—is the relative advantages of the different salicyl compounds It seems to me that the "natural" salicylic acid, as being less liable to contamination than the samples made from coal tar compounds, is preferable to the latter, and it is a matter for inquiry which no doubt will be submitted to the test of experience, and which certainly I, for one, shall endeavor to elucidate.

Broadbent was a man of very wide experience as an internist and therapeutist, and yet he was able to offer no *evidence* regarding the relative merits of these two acids But his suggestion that it would be better in all probability to employ the "natural" must have had some weight in influencing many of those who looked up to him for guidance So far as I have been able to discover he did not publish anything further on the subject

Latham,[7] who was probably looked on as the greatest English authority on rheumatism in his day, laid down the following rules to ensure success in the treatment of that disease

> First, *the true salicylic acid obtained from the vegetable kingdom must alone be employed* If you have to give large doses avoid giving the artificial product obtained from carbolic acid, however much it may have been dialyzed and purified An impure acid will very quickly produce symptoms closely resembling delirium tremens Secondly, give the acid without any alkali or base Thirdly, place the patient fully under the influence of the drug—that is, let him have sufficient to produce cerebral disturbance—that is, buzzing in the ears or headache, or slight deafness

These statements are dogmatic and made without reservation, and are presumably based on the results of his clinical observations Unfortunately, however, he cites no single case in substantiation of his statements The reference to dialyzation and purification of the acid relates to the attempts by Dr E R Squibb and others to remove the impurities from the artificial acid by dialysis They claimed thus to produce a perfectly pure product, but it was subsequently shown that the impurities were not colloidal and that they dialyzed readily, so that the resulting product still contained much of the original impurity Latham mentions no disadvantage of the artificial acid other than the production of delirium, and his subsequent remarks calling for the use of enough of the "true" acid to cause cerebral symptoms such as tinnitus, deafness and headache strongly suggest that if the "true" acid were carried farther in its use, it, too, might have given rise to dilirium He does not compare the efficacy of the two acids nor does he speak of the effects of the two on man in similar doses His views must have been of great weight at the time, but his failure to present the evidence on which he based his remarks detracts materially from the scientific value which can now be attached to them We do not know from him that the "true" acid did not also produce unfavorable symptoms at times We do not know that he ever used the artificial acid as a control All that we do know from him is that he strongly advocated the choice of the "natural" acid, why, he does not tell us, save for the mention of the delirium The first experimental work done on the determination of the relative advantages of the "natural" and artificial salicylates was that by Charteris and Maclennan[8]

It is not within the scope of the present communication to discuss the details of these experiments or to challenge their conduct, I shall deal only with the conclusions that have been drawn from the results they obtained and will refer the reader to an article by J A Waddell[1] for detailed consideration of the individual experiments

From their experiments they make the following deductions

> These experiments prove that salicylic acid obtained naturally by oxidation of salicin, or from the oil of wintergreen, in 10 grain doses, has no deleterious effect, that salicylate of soda obtained from the natural salicylic acid, in 32 grains, is not lethal, but that it causes prostration and lowers the temperature
>
> On the other hand, it is conclusively demonstrated that salicylic acid, artificial, in a 10 grain dose, causes first, paralysis of flexors, secondly, death by violent convulsions Sodium salicylate, artificial, in 18 grain doses, is lethal
>
> The deductions from these experiments indicate that artificial salicylic acid and its salt of sodium are dangerous and in large doses fatal to animals, while natural salicylic acid and its salts of sodium are not

They believe that this difference depends doubtless on *some impurity in the artificial acid* This conclusion is strengthened by a letter which they received from G G Henderson of the chemical laboratory of the University of Glasgow, giving the results of his examination of samples of the two acids used by the authors He found that the artificial was impure, containing "a small quantity of another acid which I have no doubt is the cause of the appearances observed after the use of artificial salicylic acid" Further, he says, "I should add that no trace of this substance is to be found in natural salicylic acid"

Subsequently Henderson isolated this impurity and Charteris and Maclennan tested it, finding that "the action of this impurity seems to be of the nature of a slow but certain poison, and the lethal dose is relatively much less than that of salicylic acid"

They close their paper with the following

> The obvious conclusions from these experiments are that artificial salicylic acid contains an impurity or impurities, and until this or these can be extracted by the aid of chemistry the internal administration of it or its salt of sodium should be discountenanced. Large and repeated doses of the sodium salt are necessary in the treatment of acute rheumatism, and hence we may account for the restlessness, the confusion, and the delirium sometimes attendant on its use, which have been testified by clinical experience It is more than probable, too, that the retarded convalescence occurring in some cases of acute rheumatism after the salicylate treatment is due to the great and protracted prostration which the impurity or impurities give rise to It is to be remembered in connection with these symptoms that prescriptions of the salicylate of sodium are invariably made up, unless

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[6] Broadbent Lancet London 1882 i 138

[7] Latham Brit Med. Jour 1886 i 735 (Croonian Lectures)

[8] Charteris and Maclennan Brit. Med. Jour 1880 ii 1208.

otherwise indicated, from the artificial and not the natural salt[9]

The first criticism of the work of Charteris and Maclennan is that they have drawn far-reaching conclusions from decidedly insufficient evidence They made only three experiments with sodium salicylate, one with the artificial and two with the "natural", and only two tests of the salicylic acid, one with each variety Further, as remarked by Waddell,[1] all of these tests seem to have been made on but two animals, one for the "natural," the other for the artificial In addition, it is obvious that they tested the action of only one specimen of each of the preparations They therefore made no controls of the reactions of the animals they used, and established a lethal dose as the result of a single test The specimens of the preparations which they employed may or may not have been representative of what was to be found on the market at that time And yet from these experiments on but two animals they offer without hesitation the explanation of many of the untoward symptoms seen at times during the therapeutic administration of the drug to man

If their statement is correct regarding the dispensing of the artificial preparations, then how many of those who have reported favorably on the beneficial effects of the salicylates, without any specification as to which class of preparation they were using, have been, in fact, reporting the salutary action of the condemned artificial products? On the other hand, if Martindale and Squire are correct, how many of the unfavorable impressions relating to the action of the salicylates have been founded on the action of the "natural" preparations? The numbers were legion of these two groups of reports which appeared at about this time and in which there is no mention made of the source of the preparation

Thus far Charteris and Maclennan's case in favor of the "true" salicylates is none too strong, we shall hear more of their work later

The discussion[10] of the paper by Charteris and Maclennan contains some points worthy of our attention Dr Shaw remarked that "all the evil effects generally attributed to the action of salicylate of soda were not due to extraneous causes It was not only on account of price that it was preferred to salicin, as it was a more efficacious drug He had seen delirium and hemorrhages following the use of salicin as well as after salicylate of sodium"

Haig said that he thought that the toxic effects of sodium salicylate had been exaggerated, but that there was a great difference in the different specimens Taylor said that he gave 20 grains of sodium salicylate [artificial] every two hours and found delirium by no means uncommon Myers "could not agree with the great danger of producing toxic effects with that drug" [i e, artificial sodium salicylate] Bruce said that he could not agree with Taylor, for he had rarely seen delirium, though he gave 15 grains or more every three hours He thought the drug then in use finer than formerly, for toxic effects were rarely seen

Shaw's remarks indicate that he considered many of the unfavorable effects of salicylate administration as due to the action of the salicylate itself and not to the presence of impurities derived from the phenol in the process of synthesis He certainly implies this construction when he further adds that he has "seen delirium and hemorrhages following the use of salicin as well as after salicylate of sodium"

Haig's statement to the effect that there was a great difference between different specimens of the artificial salicylate of soda serves to strengthen the similar suggestion, which I made in discussing Charteris and Maclennan's results, that the specimens which they used may or may not have been representative of what was to be found on the market at that time

Taylor's dose of the drug is rather high and it is not impossible that a similar amount of the "natural" salt would have produced a like result, for in the paper by Latham,[7] he advises that sufficient of the "true" acid be given to produce cerebral disturbance," and subsequently says, "In the majority of cases 80 to 100 grains are enough' It takes approximately 115 grains of sodium salicylate to yield 100 grains of salicylic acid so that, given in doses of 20 grains every two hours, only six doses would more than correspond to 100 grains of the acid In addition Haig, Myers and Bruce could not agree with the experiences of Taylor

The experiences, then, of those who discussed the paper of Charteris and Maclennan tend, if anything to oppose the idea of greater toxicity of the artificial salicylate of sodium, and to refer such unfavorable effects as are seen to the action of an excessive amount of salicylate, regardless of its source

We now return to Charteris[11] and quote from a second paper of his in which he says that "there has been a steadily growing conviction that artificial salicylate of soda is depressing, and further that in certain cases there is cerebral excitement culminating in delirium " He cites the experiments which he had described in the preceding communications He then relates having tested two samples of supposedly "pure" artificial acid on rabbits, and 15 grains per 2½ pounds were found to be fatal

Next, he cites Williams, whom I have already quoted[3] He followed Williams' directions for the purification of the artificial acid, preparing a pure salicylic acid which had the appearance of the "natural" and a similar melting-point He made three tests on rabbits with this purified acid and found that "the result was most satisfactory", "that there was no paralysis and no depression but that, on the contrary, the animals were neither up nor down, but were able to run about with ease after the last injection"

As a result of these experiments he remarks that "these facts show that the process of purification, even on a small scale, is not tedious or difficult, and in all probability it could be done easily and thoroughly on a large scale with less loss of time, and at only a slightly increased cost, as compared with the present method [1890]"

Up to 1890, he says

> So far we had found none [i. e no specimens of artificial salicylic acid] able to stand the physiologic test
> But on Jan 1, 1890, unsolicited, a Berlin firm communicated with me through their agents in London This firm sent specimens supposed to be chemically pure, but when tested they were found to be not quite so, though relatively so Since then specimens of acid have come from the same firm which give the same physiologic action as that from the natural salicylates

He concludes by saying, "F[illegible] in medicine they [pharmaceutical che[illegible] large crystalline form of the artificial acid, and from this alone should the salicylate of soda be prepared" Charteris had previously described the chemical and physical characters of the "natural" acid and of the completely purified artificial product The two were the same

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[9] In the same volume (Brit Med Jour 1889 ii 1315) Mr Martindale writes in regard to this statement regarding the filling of prescriptions The reverse is the rule with all good dispensing establishments in London Messrs Squire & Sons confirm Martindale s statement.

[10] Brit. Med Jour, 1890 i 350

[11] Charteris Med. Chir Tr.,

The results of this second set of observations by Charteris tend to show that the deleterious actions of the artificial acid were not inherent in the acid but were wholly dependent on the presence of an impurity, a view suggested by most of the preceding authors, but, until now, not definitely established They further show that it is quite possible so to purify this acid as to obtain a product having the physical, chemical and pharmacologic characteristics of the "natural" product That this process of purification is neither complicated nor unduly costly seems to have been demonstrated by his work Lastly the commercial purification of the artificial salicylate seems to have been accomplished to the extent of yielding a product in no way different from the "true" acid These results, coming from one who formerly was so powerful an advocate of the use of none but the pure "natural" product, are the more convincing, for there can be no contention of blind adherence to a preconceived notion.

Charteris must certainly have convinced himself most firmly of the similarity between the completely purified artificial acid and the "natural", of the equal efficacy of this purified product and the "natural", and of the purity and efficacy of the sample of the commercially purified product, before expressing conclusions so diametrically opposed to those which he had previously expressed

The objection may be raised here that his methods were not checked up by control experiments in this latter work any more than they were in the former This objection has lost much of its validity, for at the time of this report he had made tests similar to the earlier ones on a much larger number of animals and with a considerable number of specimens of salicylic acid Each test thus made served, in a measure, as a control for the succeeding Nevertheless, it is regrettable that he still contented himself with a few tests when he might have made his evidence vastly more valuable had he but doubled or trebled their number

In the same year that this last communication of Charteris' appeared, Dunstan and Bloch[12] published a paper in which they entered into a consideration of the chemical side of the relative purity of the two acids and discussed means of purification They say

> Therapeutic observation has, however, disclosed the fact that both the commercial salicylic acid and that purified by dialysis produce effects when administered to the human subject which are not observed to result from the administration of the pure salicylic acid, prepared from the methyl salicylate contained in the natural oil of wintergreen

They cite several observers who found from 6 5 per cent to 30 or 40 per cent of impurity in the commercial acid of that time

They further remark, "It will be seen that the toxic action of the artificial salicylic acid of commerce has been definitely traced to an impurity "

They found ortho- , meta- and paracreosotic acids in the specimens which they examined

In the same volume[13] there is a report from Charteris on the results of biologic tests of these creosotic acids on rabbits He found the ortho- and para-acids highly toxic to these animals [two animals, one for each of the acids] Metacreosotic acid was non-toxic He further made two tests on rabbits of purified artificial salicylic acid and found it to give satisfactory results, i e that it was not toxic

To quote

> The ortho and paracreosotic acids by their physiologic action show that they are slow but certain poisons, causing prostration and paralysis affecting first the hind limbs and gradually extending over the body
>
> The well defined crystalline form of the acid [artificial salicylic] with a melting point of almost 157 C, should be the official form of the artificial salicylic acid, and from this alone should the salicylate of sodium be prepared
>
> I may add that if salicylic acid be prepared from synthetic carbolic acid, having a melting point of 42 C, it then contains no impurity Its melting point is 157 C, and, its physiologic action is in every way satisfactory

There is a fuller presentation of the same paper by Charteris in the *British Medical Journal*[14] from which I quote his closing remarks

> sufficient evidence has been adduced to show that in cases where poisonous symptoms have been evoked by the administration of large and repeated doses of the artificial salicylate of soda in rheumatism, they are dependent on its containing the impurities mentioned [that is, o and p creosotic acids] Further experiments may be necessary to determine whether the amount of paracreosotic acid contained in some samples of commercial salicylic acid is sufficient to produce poisonous effects on a human subject My experiments show that when injected into small animals it is poisonous, though in a less degree than the ortho acid, and that its poisonous effects are intensified when combined with the ortho acid, and still more so when incorporated with this acid and salicylic acid

Regarding the sodium salt of paracreosotic acid he says that " judiciously given, [it] may be of benefit in certain diseases "

These three communications, the one by Dunstan and Bloch, and the two by Charteris, serve further to establish the fact that the unfavorable actions of salicylic acid and its sodium salt, derived synthetically, are not inherent in these preparations but are due solely to the presence of impurities which it is quite possible to remove completely They further confirm the previous work which showed that the artificial salicylates when efficiently purified are physiologically identical with the corresponding "natural" salicylates

In spite of the work done by Charteris it is difficult to accept his contention that paracreosotic acid is so much to blame for the production of the toxic effects as he says it is, for he himself admits that its sodium salt has been used in therapeutics In Germany at about this time sodium paracreosotate [paracreosotinate] was in use in medicine and did not cause any severe toxic symptoms when given in doses of 5 grains each Further, in the light of the work of Waddell,[1] we are almost forced to reject this idea Waddell has also shown that "mixtures of paracreosotinate of sodium with natural sodium salicylate do not exhibit greater toxicity than the components " This contradicts the previous statement made by Charteris regarding their combined action Further, in a letter to the *British Medical Journal*[15] Professor Stockman takes exception to the contention that the toxic impurity of artificial salicylic acid is creosotic [creosotinic] acid In this letter he says

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[12] Dunstan and Bloch Pharm Jour and Tr 1890 91 Series 3 xxi 429

[13] Charteris Pharm Jour and Tr 1890 91 Series 3 xxi 430

[14] Charteris Brit Med Jour, 1891 i 695

[15] Stockman Brit. Med. Jour, 1890 ii 1271

> That this substance is not creosotic acid seems to me to be proved by the following considerations.
>
> 1. The results of clinical experience with creosotate of sodium, it was used by Buss (1876) in doses up to 4.0 gm., by Gatti (1879) in 5.0 to 8.0 gm. doses, and by Demme (1889) in children up to 1.5 gm. None of these authors observed that it had any particular poisonous effects, and they agree in concluding that its action is practically identical with the action of salicylate of soda. It will be observed that Demme used paracreosotic acid, which is stated by Professor Charteris to be so poisonous that 2 grains of it killed a rabbit weighing 1½ pounds.
>
> 2. The chemical constitution of creosotic acid. Chemically it is very closely allied to salicylic acid, and from what we already know of the relationship in physiologic action among the members of this series, one could predicate with certainty that in action it would closely resemble salicylic acid.

Stockman is of the opinion that the specimens of creosotic acid which Charteris tested also contained the same unknown impurity as did the salicylic acid he had previously tested.

May[16] cites the same observers as have just been mentioned in the quotation from Stockman. He notes that Demme gave 90 to 120 grains of paracreosotinic acid to men without the production of toxic symptoms. May conducted some experiments on man and animals with the several creosotinic acids [creosotic] and concludes by saying:

> The creosotinic acids resemble salicylic acid in their action as antifermentatives, as bactericides, as antipyretics, and as specifics in acute rheumatism. Their toxic effect in animals is about the same, but orthocreosotinic acid is more depressing to the circulation.

These remarks by May and Stockman merely throw doubt on the accuracy of the determination of the precise chemical nature of the body which was the cause of the deleterious action of the salicylic acid which Charteris used and the truth of the remarks of Stockman were, in turn, challenged by Dunstan. It would carry us too far afield to consider this phase of the problem. All that concerns us at the present moment is the question of the purification of salicylic acid and the action of the purified product.

Taking cognizance of these differences of opinion and the objections to Charteris' conclusions, we have not impaired the validity of his work with regard to the lack of toxicity of the purified artificial salicylates. And the number of experiments which he had by this time done with the purified products is sufficient to remove the objections on the ground of possible idiosyncrasies on the part of his animals.

I might here make brief mention of Henderson's[17] observations on the question of the purification of salicylic acid. He tried many methods and found that the very simple one devised by Williams[3] was the most satisfactory. He found as impurities creosotic acid, parahydroxybenzoic acid, and hydroxyisophthalic acid. He remarks, "It is therefore a comparatively simple matter to manufacture a pure salicylic acid—indeed, I understand that this is now being done." (1890.)

Stockvis[18] seems to have been about the only man outside of Great Britain to make any studies on the relative advantages of the artificial and the "natural" salicylates. He cites the paper of, "Chartens and Machyon," which is obviously intended as a reference to that of Charteris and Maclennan. Stockvis used the sodium salt of each of these acids.

His findings were, in brief, that the "natural" was much milder in its actions than the artificial, that the "natural" acid was excreted the more rapidly in the rabbit and man, that with the more rapid excretion of the "natural" there was a marked diuresis in addition (this was not true of the artificial), and that, in the same doses, the actions of the "natural" were less marked on the rabbit than those of the artificial, but that the lethal doses were quite the same. On frogs' hearts the salicylates caused depression, smaller doses of the artificial being required than of the "natural." He cites the experience of Moerel, who took the drug daily for fourteen days in doses of 0.2 gm. every four hours [about 3 grains four times a day]. On the first day he observed headache, which soon passed off, there was no effect on sleep, appetite or other function. The temperature was little altered. These symptoms were less marked in the case of the "natural" product. The pulse-rate was somewhat increased by the artificial and less by the "natural." Respiration was raised in rate by the artificial, and practically not at all by the "natural."

Taking all of the results together, Stockvis remarks that there is hardly to be noted any qualitative difference in action between the artificial and natural. He says that one must agree unconditionally with "Chartens and Machyon" that the difference is merely quantitative, and that the natural is the less toxic. That in the explanation of this difference the more rapid elimination of the natural plays a great part, this he attributes to "osmotic peculiarities" of this acid. He found that the electrical conductivities of the two acids were not identical, and that the "natural" was impure chemically, being mixed with an extremely small amount of oil of wintergreen. He said that our next task would be to free the natural acid completely from the methyl-salicyl-ester and make comparisons of this with the pure artificial acid.

He concludes with the remark that "so much is evident, that the chemically impure 'natural' acid is better therapeutically than the chemically pure artificial."

In view of all of the previous work one cannot be but struck by Stockvis' conclusion that the *milder* actions of the "natural" salicylates are due to their *impurity* while the artificial compounds are pure. Such a view must be taken with considerable reserve, for it is opposed to all of the chemical and pharmacologic studies which we have thus far reported. In his work there is a further rather anomalous statement to the effect that though the "natural" salicylates were found to be "less marked" in their actions than the artificial, the fatal dose was the same for the two forms. When we recall that he also said that "there is hardly to be noted any qualitative difference" between the two, and that "the difference is merely quantitative," we are at a loss to know how to reconcile two contentions so completely antagonistic.

It may be true that the "natural" gives a greater diuresis than the artificial, but just how this explains the "milder actions" of this product is by no means clear, particularly in the experiments in which the drugs were applied to the frogs' hearts. Why this diuretic effect of the "true" reduces its actions to a less marked grade and does not similarly effect its lethal action is also difficult of comprehension.

The evidence brought forth by the self-made observations of Moerel is not convincing, for the differences he experienced in the effects of the two salicylates are so slight as to be accounted for as being the results of the psychic influences of a preconceived idea. Finally Stockvis' failure to look further into the literature of the subject than the earliest work by Charteris accords with the general superficial character of his observations.

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[16] May: Brit. Med. Jour., 1909, ii, 791.
[17] Henderson: Jour. Soc. Chem. Indust., 1890, ix, 591.
[18] Stockvis: Wien. med. Presse, 1894, xxxv, 1209.

Lewin[19] adds nothing to what has already been discussed, but he repeats that the impurities of the artificial salicylic preparations are responsible for their side actions, such as delirium and cerebral excitement. While this is true regarding the difference between the actions of the two classes of salicylates, he remarks that it must be borne in mind that pure preparations are not devoid of side actions. These impurities are probably the ortho- or paracreosotic acids. His work is not original. It is merely his summary of the literature, with the stamp of his interpretation of the value of the several ideas suggested. I introduce this merely on account of the fact that what appeared in Lewin's book must have had some influence in molding medical opinion on account of the reputation of the author.

Along with the preceding it may be well to cite the monograph by Pribram,[20] in which he reviews at length the greater part of the literature relating to the salicylate therapy of rheumatism. He details a very formidable array of unfavorable effects of the salicylates, without mentioning whether they resulted from the "natural" or the artificial, and then remarks that it is obvious that many of these phenomena, including death, were probably in no way attributable to the action of the salicylate, on which the blame was thrown.

The first of the American papers to deal with the question of the relative merits of the two forms of salicylate seems to be that by a pharmacist, Cone.[21] His evidence is composed of citations from some of the authors whose work I have already discussed, and from some whose papers I have been unable to find, as Cone gives no references. Among the latter is one from Dr. H. M. Lyman, who said, in an address, that he had had the following early experiences with the use of salicylic acid and sodium salicylate: he "found that the results were not so good from preparations made in this country as from the original German article, due to impurities in the former." He reports a case of delirium tremens-like symptoms from its use.

Dr. Simon Baruch is cited as saying that to get the effect from the salicylates without their inconveniences, pure salicylic acid should be used; only that derived from the oil of gaultheria should be employed.

Dr. Abraham Meyer is reported as saying that only the salicylic acid from genuine oil of wintergreen should be used; that the others [i. e., the synthetic and the salicylic acid derived from the synthetic oil] cause disturbance of the stomach, and delirium.

After citing the work of Charteris and Maclennan, of Dunstan, and Charteris' second paper, Cone goes on to discuss the tests for purity and their ability to detect adulteration. He concludes as follows:

> At present a very large percentage of the oil of wintergreen on the market is adulterated, mostly with the synthetic methyl salicylate, and this adulteration has been the most difficult to detect, possessing as it does, about the same chemical composition and with physical characteristics nearly identical.

Pancoast and Pearson[22] also have entered into the study of the purity of the salicylic acid sold as "natural," and, though it breaks the chronologic order, I shall bring in their findings at this point and discuss the two papers together. They say:

> Since the so called natural salicylates have met with such wide spread favor as therapeutic agents, there has been a tendency on the part of a few unscrupulous distillers, dealers and drug merchants, to substitute the low priced synthetic products. This tendency has more rapidly grown as there has been no accurate means of detecting the sophistication.
>
> For some years chemists have endeavored to detect the presence of synthetic methyl salicylate when added to oil of birch or gaultheria, but, owing to the great similarity of these products, the task has been very laborious. All three of these products contain at least 99 per cent. of absolute methyl salicylate.

While these two papers from pharmacists add very little of value from the clinical or experimental aspects of the question, they are of interest because they serve to show how slight the chemical differences between the "natural" and artificial salicylates are—not over 1 per cent. according to one—and how difficult it is to be certain that one really has the "natural" product, and not, in fact, a combination of the two. This suggests a little doubt as to whether all of those who have praised the "natural" salicylates so highly have in reality been using the drugs they lauded, or only mixtures of "natural" with the artificial. This applies particularly to the clinical reports, for in most of these the question of purity of the product was not investigated. The vast difference in the price of the two classes of salicylates makes adulteration far more probable than not in many instances. It is not improbable, then, that many have unwittingly sung the praises of the artificial in the belief that it was the pure "natural" salicylate.

The last three papers which I shall present are from American authors and are purely clinical in character, hence they are subject to the criticisms which I have just made regarding the possible impurity of the products used. It is certain that the authors were sincere in their beliefs that what they used was only the "natural" salicylate, but who is to check the purity of the salicylate that the local pharmacist uses in preparing the prescription? Even if he be acting in good faith, it is not probable that he can be any more certain of the purity of the preparation that is sold to him than is the physician of that he receives from the druggist.

The first of these papers is by Dr. Winters,[23] in it he speaks of the salicylates only in the course of the discussion of the treatment of rheumatism. He says that there is a positive chemical antidote to rheumatism and that "this antidote is an *organic* chemical compound. Synthetic salicylic acid has no effect." He gives no data on which he bases these statements. This is the strongest support of the "natural" salicylic acid and the most severe condemnation of the synthetic that I have found.

The second is based on the observations of Rosenzweig and Ronginsky.[24] As the result of some clinical observations on the artificial and "natural" salicylic acids they reported, "The 'natural' product does not depress the heart as much as the artificial product; it does not upset the stomach so much; it acts more rapidly." Like the preceding author, they do not give the data on which they base their statements; the statement quoted above was, in fact, reported as coming from them by a third person, Dr. Kahn, who had asked them to make the observations This kind of evidence is certainly far from convincing and has no scientific value

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[19] Lewin: Nebenwirkungen der Arzneimittel, 1899, Ed. 3, p. 436.

[20] Pribram: Nothnagel's Specielle Pathologie und Therapie, v, Part 2, 449.

[21] Cone: Am. Jour. Pharm., 1903, lxxv, 401.

[22] Pancoast and Pearson: Am. Jour. Pharm., 1908, lxxx, 407.

[23] Winters, J. E.: Etiology of Rheumatism, etc., pamphlet published by author.

[24] Rosenzweig and Ronginsky: Quoted by Kahn in Druggists Circular, 1908, lii, 345.

The third of these papers is by Dr Lambert,[25] in which he strongly advocates the use of the oil of sweet birch in preference to the synthetic salicylates, and in fact in preference to any other of the salicylates He bases this on clinical experience and while he thus advocates the use of the "natural" salicylates, he does not by any means exclude the usefulness of the artificial, for he specifically says that if one of the common forms of salicylate does not agree with the patient we should try others until we find one that does " if the patient is resistant to that [true oil of birch], it should be changed to some other form of salicylate"

It does not seem necessary to enter into a separate discussion of the last three papers, for such of the previous criticisms as apply would only have to be repeated

Before summarizing it may be of interest to cite from two personal communications from Professor Stockman of the University of Glasgow to one of the members of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry From the first, written in October, 1911, I shall quote

> Some years ago I examined five samples of artificial sodium salicylate from different manufacturers I found that four of them were *practically chemically pure*, and *differed in no way as regards clinical action*, and *chemical tests from the "natural"* sodium salicylate[26] So far therefore as my own experience goes I regard the matter as settled

He further says that "gross differences certainly do not exist between the actions of pure artificial sodium salicylate and the so-called 'natural' product" In a second communication he says that he has gone into the question of the "natural" and synthetic salicylates and he has "found that the pure synthetic acid is not more poisonous than the other ('natural')" He also finds, as a result of therapeutic examinations, that creosotic (creosotinic) acids "can be given in doses similar to those of the salicylates"

Before drawing any conclusions from the material which I have been able to collect as bearing in any way on the question of the relative value of the artificial and "natural" salicylates, I shall briefly summarize the evidence brought forth in the papers and discussions which are here presented

There is first the clinical evidence I have been able to find only fourteen expressions of opinion from the clinical point of view favoring the "natural" salicylates over the artificial One of this group (Maclagan)[2] speaks only in favor of salicin, and his reasons for his views go far to invalidate his contentions A second (Charteris) favored the "natural" in his first paper only, and subsequently specifically advocated the use of the pure artificial salicylates A third (Lambert) favors the "natural" but does not condemn the artificial, using it when the "natural" is ineffective The rest of those who favor the "natural" salicylates in general give no evidence in support of their contentions, merely stating their views more or less firmly Two do give clinical evidence for their contentions (Fowler and Stockvis), but in neither case is the evidence at all convincing Only two (Maclagan, Winters) have challenged the therapeutic value of the artificial salicylates

Second, there is the chemical evidence This is of a positive nature and the findings are, in all probability, quite correct It is to be remarked, however, that such findings apply only to preparations on the market prior to 1900, and there is no evidence to show that the synthetic preparations of the present day are not chemically pure There is in fact, evidence to support the view that they are pure (Waddell[1]) On this point we must remember that there is reason to believe that sodium paracreosotinate in small amounts is not toxic to man,[1 15 16] and this is the chief impurity blamed for the alleged inferior worth of the artificial salicylate

There is experimental evidence from three sources only First is that from Charteris and Charteris and Maclennan This ultimately showed that it is commercially possible to purify the artificial salicylic acid so completely as to yield a product, physically, chemically and pharmacologically identical with the "natural" And the author of this work advises the use of the artificial salicylic acid thus purified The second experimental work is that of Stockvis This, we have seen, means, if it means anything, that the artificial and "natural" salicylates have the same qualitative actions, but that the "natural" is *milder*, though no less fatal The last experimental work, that of Waddell, gives very strong evidence that the *cheapest procurable artificial salicylates* of the present day are in no way different pharmacologically from the costly "natural"

In the period of thirty-eight years during which time the artificial salicylates have been in use in medicine, there are to be found, in the entire realm of accessible literature, less than twenty-five communications dealing, even casually, with the relative advantages of the artificial and the "natural" salicylates In all these years many thousands of patients have been treated with large doses of the artificial salicylates and many of the ablest clinicians and the most acute observers in England, America and on the Continent have watched the results of such treatment Yet there are a scant fifteen who have been led to report these preparations as being more harmful than any other form of salicylate administered under similar conditions, and in similar amounts The rest have probably rightly attributed such ill effects as mental excitement, delirium, nausea, vomiting, tinnitus and the like to an excessive amount of the drug or to an idiosyncrasy on the part of the patient, or perhaps to both

We have to remember, also, that nearly all of the reports of the deleterious actions of the synthetic salicylates were made well over ten years ago, and that it is possible that at that time certain samples of these products were badly contaminated

At the present time the idea of the superiority of the "natural" salicylates is sedulously fostered by certain manufacturers, rather than by the experiences of the medical profession In the "literature" and advertisements of one of these, Charteris is quoted as one of the powerful advocates of the "natural" salicylates I would suggest that, in the future, mention should be made of his second and third papers, rather than of the first only

In conclusion, let me say that I have presented all of the evidence from the literature which I can unearth I have tried to make the excerpts and quotations in such a way as to present the opinions of the several authors with neither omissions nor alterations, such as might in the least alter the mea [illegible] each wished to convey Lastly, I have broug [illegible] objections to [illegible] dence on either si [illegible] me in the rea [illegible] of this one

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25 Lambert The Use of Salicylates in Rheumatism The Journal A. M. A Sept 9, 1911 p 898

26 Italics mine.

From the material at hand there seem to be but two logical conclusions

1 The evidence in favor of the "natural" salicylates rather than the artificial is extremely slight, or what amounts to the same thing, the evidence against the artificial salicylates is even less

2 In nearly forty years of use by physicians all over the world, the artificial salicylates have been found quite as effective as the "natural" and no more liable to produce unfavorable actions under similar conditions than are these vastly more expensive "natural" products

414 East Twenty Sixth Street

A METHOD OF CONTINUOUS DILATATION OF EXTENSIVE URETHRAL STRICTURE

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Three decades ago the followers of Otis, who were very numerous, cut every stricture of the anterior urethra To-day strictures of the pars anterior are rarely cut This is owing to the teachings of Oberlaender, Wossidlo, Valentine and Kohlmann, and to the consequent increase of knowledge and more careful study of the dilatation treatment It took years to establish the principle that sounds and dilators are not used to stretch strictures Such an instrument in the urethra exerts a dynamic influence According to Oberlaender, it induces retrograde metamorphosis, a reconversion of the fibrillary tissues into the original small-celled deposit, permitting absorption It has been intimated that the cells of the infiltrate are rendered soluble or diffusible or absorbable by peptonization, and again that absorption is favored by a teasing apart of cells, as in the Bier method of inducing artificial hyperemia Whatever theory may finally explain the phenomenon it may be fairly stated that pressure absorption of urethral inflammatory infiltrations, soft and hard is an accredited and authentic observation

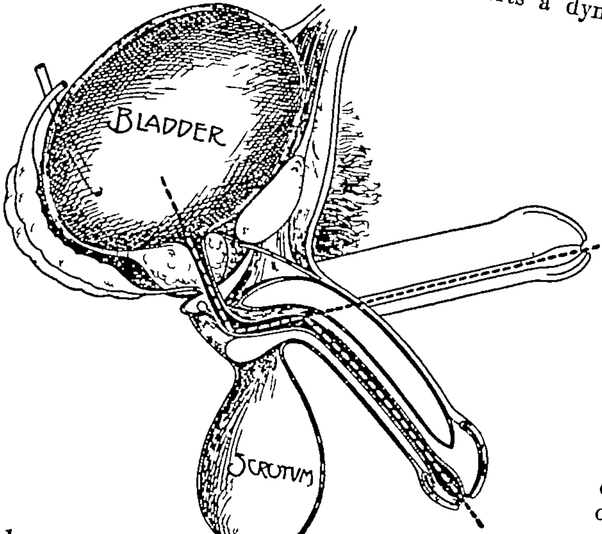

Fig 1—Curves at membranous portion of urethra and penoscrotal junction (after Gray) In erection only one decided curve is presen

After perineal section for strictures that narrow both the anterior and posterior divisions of the urethral canal, it has been my practice to drain the bladder by the natural route leaving a large soft rubber catheter in the urethra This plan has some advantages The period of convalescence is shortened, since the perineal wound closes more promptly if the urine be drained through the catheter The urinary salts which irritate the mucosa and favor stricture formation (Keyes) are not permitted to touch the urethra The caliber of the urethra is maintained or even increased, and the subsequent passage of instruments is rendered easy Much of the tedious work of after-treatment, such as sounding, becomes unnecessary or is decidedly lessened Soft and hard infiltrations of the pars anterior are removed by the pressure absorption induced by the presence of the catheter

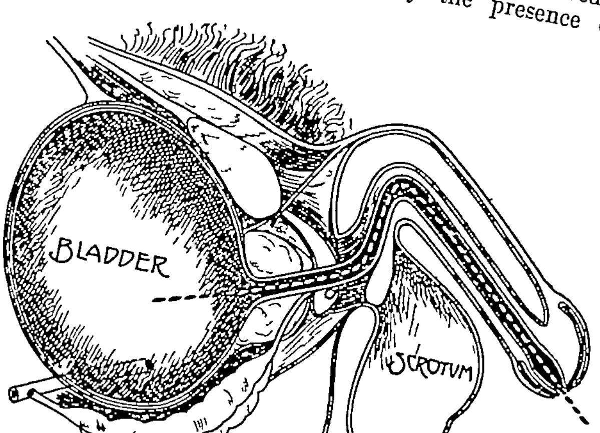

Fig 2—Sharp penoscrotal angle The normal angle is shown as it is exaggerated by depression of the outer end of the catheter into urinal

If a perineal drain alone be used, there is, of course, no continuous dilatation of the anterior urethra

There is, however, one defensible objection to the use of the dilating catheter if employed as described above Lying in the urethra and extending from the bladder to the external meatus it usually becomes sharply curved or angulated in the pars membranacea and at the penoscrotal juncture The pressure induced by the sharply flexed catheter at the penoscrotal angle has led to abscess formation or extensive inflammatory reaction often enough to suggest the need of a departure from the plan of using the same catheter for drainage and dilatation, and of employing instead two large elastic soft rubber catheters, one as a perineal drain, the other for dilatation of the pars anterior

It has been observed by those who are accustomed to drain the bladder through the urethra for certain conditions that a small soft thin-walled rubber catheter has less tendency to cause abscess than a large rubber tube with thicker walls The former, however, is of much less value as a dilator, and is more difficult to retain in position If the outer end of the catheter be drawn up over the abdomen and connected with a urinal at the side of the bed, one curve is made of the urethral canal, and the danger of abscess lessened It is not easy, however, thus to hold a catheter in place because of unavoidable traction

From Figure 1, it will be seen that if the external meatus be not depressed as it usually is in catheter drainage through the urethra, there need be no sharp angulation at the penoscrotal juncture If the penile portion of the urethra be elevated the entire pars anterior becomes quite straight

In order to provide simultaneous dilatation of the pars anterior and at the same time prevent angulation at the penoscrotal attachment, or bulbomembranous junction, one catheter is employed as a dilator of the posterior urethra and as a perineal drain The other short rubber tube is placed in the anterior canal The short catheter is passed from the meatus along the anterior urethra, which under anesthesia has been fully dilated, and is secured to the draining catheter by a chromic catgut loop at the opening in the membranous urethra If the danger of abscess be thus removed, the catheters may lie in the relative position indicated for two or three weeks, or longer if required, until the normal urethral caliber is permanently reestablished Ordinarily, catheters of 26 French are large enough, for the reason that after such an instrument has exerted its influence in the canal for two or three weeks the urethral caliber will be found to be several sizes larger (Charrières scale) than that of the catheter

The mechanical urethritis produced by a rubber catheter is, as a rule, unattended by symptoms other than discharge of mucopus from the meatus, which discharge subsides almost immediately on withdrawal of the catheter Such inflammations may be minimized by irrigation of the urethra before introduction of the catheter and subsequent irrigation, if practicable (it usually is practicable), between the urethral mucosa and the catheter Perhaps one patient in fifty cannot bear the retention catheter, owing to vesical spasm or chill, but even in these cases an opiate on the one hand or quinin on the other may make protracted retention possible

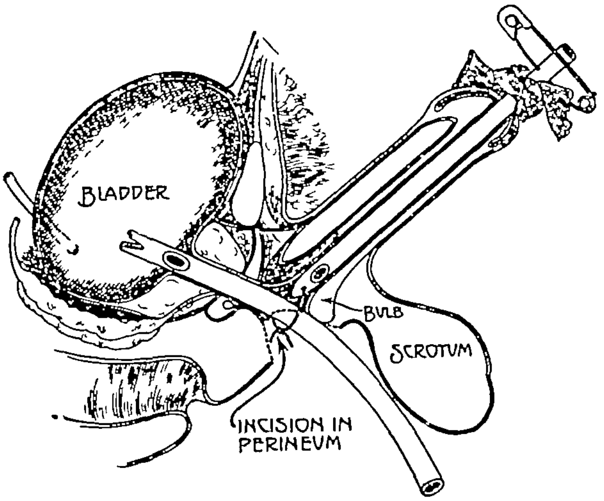

Fig 3—Author's method of draining bladder by large rubber catheter and passing second dilating catheter through anterior urethra to opening in membranous urethra where it is secured to first by a catgut loop The anterior urethra conforms itself to the catheter without angulation The penoscrotal urethral angle is temporarily obliterated Pressure here is relieved and inflammatory induration or abscess does not appear

In my cases there has been very little complaint of urethral pain, and the discharge was never annoying, usually just enough secretion of tough fibrinomucopurulent character accumulating during twenty-four hours to form a ring on the catheter at the meatus The decidedly benign urethritis became less active after the catheter had been in position for a few days In two cases the catheter was retained without changing for two months, and in these during the latter weeks, the discharge became practically *nil*

The urethral mucosa develops a tolerance for the instrument after a few days

In a few of my cases, during the first few days potassium permanganate in hot, weak solution was injected between the catheter and the mucosa, but even when this measure was omitted the urethritis was slight

The catheters used were of soft rubber, with two eyes Large sizes were chosen for the reason that such catheters as completely fill the lumen of the urethra occasion less frictional irritation than smaller ones, which readily bend sharply, or angulate, or slide and twist in the canal The presence of the large catheter in the bladder neck relieves irritability in this region Severe muscle spasm or tenesmus rarely occurs during its use

In order that during erection the outer end of the short catheter may not be drawn in through the meatus, it is secured by a safety-pin with a gauze ring to serve as a buffer

331 North Delaware Street

FAT EMBOLISM FROM A CHRONIC OSTEOMYELITIS

MERTON FIELD, M D
CANBY, MINN

The literature on "fat embolism" is remarkable because of its brevity and lack of detail Keen[1] gives a brief historical sketch of the subject, as do also LaConte and Stewart[2] In my study of the literature, however, I find no mention of fat embolism coming from a chronic bone disease with no apparent trauma Having had a case of the kind I feel it of sufficient importance to be reported

History—Miss H., aged 19, had typhoid fever at the age of 10 Since then the distal end of the femur had been the seat of a chronic inflammation with a discharging sinus In the fall of 1910 she was operated on The sinus healed and gave no further trouble until March, 1911

Present Illness—March 12, 1911, on her way to Rochester, Minn, the patient stopped off at Canby, Minn, apparently as well as when she left her home It should be noted that in addition to her railroad journey of 100 miles she had ridden fourteen miles over rough roads to the railroad station I was consulted regarding an embarrassment in her breathing Her condition was in no way serious, and my impression was that it was a simple bronchitis caused perhaps, by a slight cold, although there was no evidence of such a condition The pulse was 90, the temperature normal and the respirations were slightly *rough and bronchial*

March 13 the patient was more comfortable The bowels and kidneys were active The urine was free from albumin and microscopically was free from casts or other matter For the next four days her condition was practically unchanged except for returning paroxysms of dyspnea March 18 the patient had a hard night Breathing was difficult and cyanosis marked, but temperature was normal The bowels and kidneys were active

Treatment and Course—March 19 the patient had another hard night Some relief was obtained by the use of atropin, morphin and strychnin hypodermically The pulse range for the day was from 93 to 140, the temperature was normal while the respirations were from twenty four to twenty eight At 1 p m the chart read "cyanotic, heart action weak, respirations short, wheezy, painless" There was retention of urine, of which 14 ounces were taken by catheter during the day The patient was in great distress and was vomiting Epinephrin (adrenalin chlorid, P, D & Co) hypodermically gave some relief At 8 45 p m there was a "terrible struggle for breath" At 11 25 p m the chart graphically described the patient's condition as 'rigid, cyanotic pulseless, and comatose for forty minutes" Dr Henrik Tillish was called in consultation To him the case appeared as one of the extreme types of asthma

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[1] Keen's Surgery i, 462
[2] LaConte and Stewart American Practice of Surgery vii 198

Examination of Urine—On further study of the case I was impressed by the similarity of her condition to that which I once saw in an embolism from a compound fracture of the tibia Thinking that I might now be dealing with such a condition I took a sample of urine and examined it for the presence of fat This urine was taken by catheter while the patient was still in a semicoma, but no fat was found even after a long search with the microscope March 20 the patient's condition was improved over that of the previous day She was vomiting, and had a severe headache and nervous twitchings of the extremities She was also very weak and had retention of urine A sample taken at 7 30 p m was examined chemically and microscopically Sugar and albumin were not found but fat globules of all sizes were abundant The characteristic globules of fat were unmistakable March 21 the patient was nervous but passed urine voluntarily Fat was still present microscopically

March 22 the patient's condition was again critical. There were cyanosis, vomiting, violent headache and nervous twitching of the extremities Breathing was very difficult, the heart was weak and the pulse irregular, varying from 78 to 148, with a variation in temperature from 98 6 to 100 F, and respiration from eighteen to forty six Dr C J Holman of Mankato was called in consultation It was agreed that the diagnosis could be made only by the presence or absence of fat in the urine Urine taken March 22, during the attack, was fat free This was examined by Dr H D Vahn, pathologist of the Immanuel Hospital laboratory, Mankato, and myself I cannot give Dr Vahn's method of examination, have reason to believe that it can be relied on March 23 patient was easier I again made a microscopic examination of the urine and found fat globules in abundance Wishing for further evidence I again sent a sample of the urine to Dr Vahn for examination He confirmed my report March 24 to 30 improvement continued but with repeated mild attacks of dyspnea The mental condition was improved and the convalescence though slow, was encouraging

I have been unable to follow closely the recent history of the patient She went west thinking that a change of climate would be of benefit In this she has been disappointed and has been in failing health since The last I heard of her was to the effect that she was again in the hospital in very poor health

The diagnosis of this case depended on the presence of fat in the urine, and its intermittency Keen[3] tells us that in "every suspected case of fat embolism the urine should be examined for fat While in exceptional cases oil drops may not be detected in the urine, their presence confirms the diagnosis" LaConte and Stewart[4] say that "lipuria may, of course, be encountered in any condition mentioned above in which excessive lipemia is found Scriba was able to demonstrate the presence of fat in the urine of all his patients with fracture He found, however, that in fat embolism the lipuria was intermittent"

It is also to be noted that in the case which I have reported, fat was found only after the severe attack of dyspnea and cerebral disturbance Extreme care was taken that the samples of urine were not contaminated with fat from outside sources and the results as given cannot be questioned

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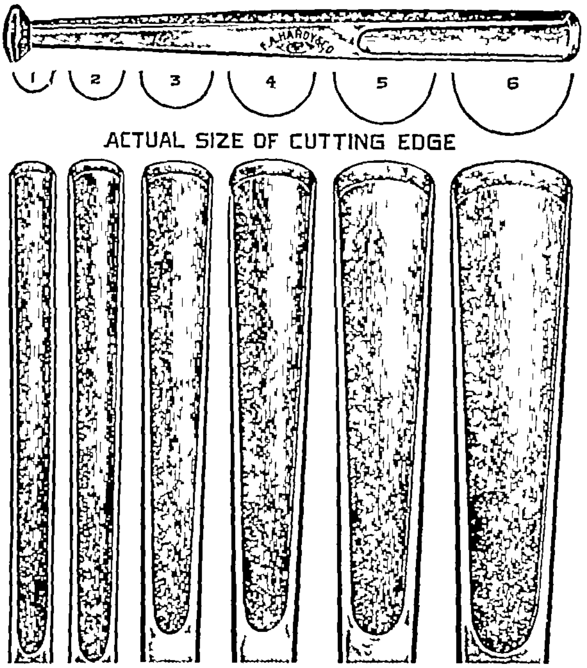
NEW MASTOID CHISELS

Frank Allport, M D, Chicago

There are various mastoid chisels in use some being acutely rounded at the end some being square, others having concave convex bodies and still others being flat All have their advantages and their disadvantages Those with markedly rounded cutting edges allow the apex to sink into the bone before the sides, and thus necessitate uncertain chiseling, while the square edged chisels, with pointed corners, are dangerous, as injury to the nerves, sinus, brain, etc, is liable to be caused by the sharp angles of the lateral edges To avoid such difficulties and to possess a chisel combining the good and none of the bad qualities of the instruments in general use, I have had made, in six different sizes, a set of chisels which are concave convex, bevel sharpened on the front, very gently rounded on the back and slightly rounded on the edge with the corners turned forward so as to inflict no injury For safety, sureness, accuracy and ease of manipulation, I have found them more satisfactory than any other chisels I have used



New mastoid chisels

7 West Madison Street

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES"

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL

W A. PUCKNER, SECRETARY

GLYCOTAURO—Bile Salts, H W & Co—Glycotauro is concentrated ox bile, freed from bile pigments, each 1 Gm representing approximately 10 Cc of fresh ox bile

Glycotauro is prepared by evaporating ox bile in presence of animal charcoal extracting the residue with purified methyl alcohol filtering evaporating the filtrate and mixing the residue with glycerin

Glycotauro is a soft, semi-solid mass of light brown color bile like odor and slightly bitterish taste It is easily soluble in water and alcohol. Its specific gravity is about 1 22

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[3] Keen's Surgery i 406

[4] LaConte and Stewart American Practice of Surgery vii 201

Actions and Uses—See Bile Salts (N N R, 1912, p 44)

Manufactured by Hynson, Westcott & Co, Baltimore Md No U S patent or trademark.

Glycotauro Capsules, 5 grains—Each capsule contains glycotauro 0 3 Gm (5 grains)

Glycotauro Pills, 1 grain—Each pill contains glycotauro 0 06 Gm (1 grain)

MERCURIAL OINTMENT, IMPROVED, Mulford—An ointment containing 50 per cent of metallic mercury in an ointment base consisting of anhydrous wool fat, petrolatum and suet, aromatized

Mercurial ointment improved is a slate colored semi solid mass having a pleasant, aromatic odor

Actions and Uses—The same as Mercurial Ointment, U S P Mercurial ointment, improved, is devoid of the unpleasant odor of Mercurial Ointment, U S P, and is claimed to be more readily absorbed.

Dosage—The same as Mercurial Ointment, U S P

Manufactured by the H K. Mulford Co Philadelphia Not patented or trademarked

Capsules Mercurial Ointment, Improved Mulford 30 grains—Each capsule contains mercurial ointment improved Mulford 2 Gms (30 grains)

Capsules Mercurial Ointment Improved Mulford 60 grains—Each capsule contains mercurial ointment improved Mulford 4 Gms (60 grains)

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 1973)

CHRONIC DISEASE OF THE VALVES

The development of permanent injury to one or more valves of the heart may have been watched by the physician who cares for a patient with acute endocarditis Or it may have been noted early during the progress of arteriosclerosis or other conditions of hypertension On the other hand, many instances of valvular lesions may be happened on in a life-insurance examination, or are discovered by the physician making a general physical examination for an indefinable general disturbance or for local symptoms, without the patient ever having known that he had a damaged heart The previous history of such a patient will generally disclose the pathologic cause or the physical excuse

As soon as a valve has become injured, the heart muscle hypertrophies to force the blood through a narrowed orifice or to evacuate the blood coming into a compartment of the heart from two directions instead of one, as occurs in regurgitation or insufficiency of a valve The heart muscle becomes hypertrophied, like any other muscle which is compelled to do extra work Which part or parts of the heart will become most enlarged depends on the particular valvular lesion In some instances this enlargement is enormous, increasing a heart which normally weighs from 10 to 12 ounces to a weight of 20 or even 25 ounces, and extreme weights of from 40 to 50 ounces and even more are recorded

As long as the heart remains in this hypertrophied condition, which may be called normal hypertrophy since it is needed for the work that has to be done in overcoming the defect in the valve, there are no symptoms, the pulmonary and systemic circulation is sufficient, and the patient does not know that he is incapacitated Sooner or later, however, the nutrition of the heart, especially in atheromatous conditions, becomes impaired, and the lack of a proper blood-supply to the heart muscle causes myocardial disturbance, either a chronic myocarditis or fatty degeneration If there is no atheromatous condition of the coronary arteries, and arterial disease is not a cause of the valvular lesion, compensation may be broken by some sudden extra strain put on the heart, either muscular or by some acute sickness or a necessary anesthetic and operation From any of these causes the muscle again becomes impaired and the heart, especially the part which is the weakest and has the most work to do relatively to its strength, becomes dilated, compensation is broken and all of the various circulatory disturbances resulting from an insufficient heart strength develop

As long as compensation is complete, there is no medication and no physical treatment necessary for the damaged heart The patient, however, should be told of his disability, and restrictions in his habits and life should be urged on him The most important are that all strenuous physical exercise should be interdicted, competitive athletic work should be absolutely prohibited, prolonged muscular effort must never be attempted, whether running, rowing, wrestling, bicycle riding, carrying a heavy weight upstairs or overlifting in any form The patient should be taught that he should never rush upstairs, and that he should never run rapidly for a car or a train or for any other reason, he should not pump up a tire, or repeatedly attempt to crank a refractory engine, even the prolonged tension of steering a car for a long distance is inadvisable He should be told that after a large meal he is less capacitated for exertion than a man who has not a damaged heart It is better if he drinks no tea or coffee, it is much better if he absolutely refrains from tobacco and alcohol Prolonged mental worry, business frets and mental depression are all injurious to his heart Anything that seriously excites him, whether anger or a stimulating drug, is harmful Any disease that he may acquire, especially lung disturbances, as pneumonia or even a serious cough, requires that he take better care of himself and be more carefully treated and take more rest in bed than a patient who has not a damaged heart Anything that raises the blood-pressure is of course more serious for his heart than for a perfect heart, therefore the drinking of large amounts of liquid, even water, is inadvisable It simply means so much more work for the heart to do Such patients should rarely be given any drug that causes cardiac debility, and should never take one without advice This applies to all the coal-tar drugs

One other fact should be impressed on the individual with a valvular lesion and compensation, and that is that he has but little, if any, reserve circulatory power In other words, while he is in apparently perfect health, it takes little circulatory strain to push his heart to the point of danger or insufficiency As nothing keeps this reserve so good or increases it more than rest he should expect to have a restful day at least once a week, and a good rest of at least two or three weeks once or twice a year

A patient with these restrictions may live for years with a serious valvular defect and may die of some intercurrent disease that has nothing to do with the circulatory system

It is easily recognizable that as the majority of acute lesions of the valves occur in children, it is impossible to prevent them from taking more or less strenuous exercise, and this is probably the reason that we have so many serious broken [illegible] tions [illegible] youth or early adolescence

As referred to und [illegible]
symptoms for which [illegible]
indefinite and in [illegible]

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

PERUNA ONCE MORE

"Dr" Hartman, who, to all intents and purposes, is the Peruna Company, evidently has a desire to "get back" at the American Medical Association in particular and at decent physicians in general for the damaging exposés he has received at their hands To do this, he has published a large advertisement during the last few weeks headed, "Dr Hartman Makes Public the Facts As to What Doctors Think of Peruna" In it, the Peruna company declares that it has received letters from "regular practicing physicians" who have offered to write testimonials for Peruna, providing they received pay for them "But," says Hartman virtuously, "I have always refused to pay for such a service" Then he goes on

> I recently received such a letter from Kentucky from a doctor who says he has been practicing medicine for a quarter of a century and is at present medical referee for this county president of the county medical board local surgeon of the C & O Railroad member of the state medical society and American Medical Association and all that He has used Peruna and offers to give me a very remarkable testimonial if I would pay him for doing so

"It was very gratifying," says Hartman, "to receive such a testimonial from a brother physician and quite a temptation to pay him a small sum and allow his letter to be published" But no, Hartman could not bring himself to do such a thing as to pay out money for a testimonial! He publishes most of the letter anyway, however, and it doubtless made just as good bait for "suckers" and was much cheaper Says Hartman

> In referring to the doctor s letter I do not consider that I am violating the ordinary courtesies and confidences of private correspondence I have not made use of his name or the town where he resides But I am perfectly willing to communicate the name and address by private correspondence if any one wishes me to do so

For the purpose of "calling" Hartman's bluff letters were written to him asking for the name and address of the Kentucky physician member of his state society and of the American Medical Association, who had offered to sell a testimonial for Peruna One of these letters was from a physician in Illinois another from a minister in Michigan and a third from a stenographer in Kentucky Each writer received a letter from Hartman stating that while he was 'always glad to show people letters and testimonials" he would want further information regarding the 'use you are proposing to make of this name and address" before he would be willing to send it He continues

> The fact that you are a physician [a Reverend] [a woman] leads me to believe that you are not intending any hostility either toward the doctor or myself

Presumably if he had received letters from a butcher, a baker or a candlestick maker, the fact" that the writer was a butcher, a baker etc would "lead Hartman to believe that he was 'not intending any hostility"

The minister wrote back to Hartman that he desired the name so that he might write to the physician in question and find out whether he really did recommend Peruna This brought another letter from Hartman stating that the Kentucky physician no longer was friendly to him but that he would enclose—and did enclose—a copy of the original letter which he received from the Kentucky doctor Here is a copy of the letter

> Frenchburg Ky Sept 27 1910
>
> The Peruna Medicine Co, Columbus Ohio
>
> *Gentlemen* —I write to ask you if a testimonial from a grateful patient would be of any particular value to you I have practiced medicine for a quarter of a century and have been afflicted with a subacute inflammatory condition of the post nasal space and of recent years he larynx had been involved in the catarrhal process Have also been for the last fifteen years addicted to the constant use of morphia Your medicine has entirely relieved me of both conditions after only a comparatively short time and to-day am the happiest man alive Medical men will hardly believe me when I tell them that your medicine cured me of the opium habit, but it is a fact nevertheless I had tried for fifteen years every known means and took treatment at several sanitariums as every one in this part of the country will know I am willing to make oath to the above statement and if you wish it and are willing to make it worth my while I will write you the testimonial that will be valuable to you as an advertisement. I do this with no mental reservation whatever believing as I firmly do that it cured me of the most damnable habit or disease to which humanity is liable
>
> My action in this matter may have a tendency to stagger my medical friends, lauding an irregular medicine but I have considered the matter carefully and prayerfully and I propose to stand by my honest conviction I am the medical referee for this county president of the county medical board local surgeon of the C & O R R Rothwell to Mt Sterling member state medical society and American Medical Association My action may and I have no doubt will cause some criticism
>
> I am also preparing an article to be read at our next meeting of our county society on catarrhal diseases of the pharynx My treatment for these troubles is the free and regular exhibition of your Peruna Will send you a copy of the article if you wish it If you wish to use it for the benefit of suffering humanity I will send you the testimonial with my photo There is no gallery here but I can got one by going to Mt Sterling Ky thirty miles from here I am satisfied this will redound to your benefit in a financial way but the best of all if it will be the means of saving even one poor soul from a living hell I will be satisfied I am treating now seven cases of opium habit and my principal treatment is your preparation
>
> I am a graduate of the University of Louisville Ky class of 87 and have taken the postgraduate courses at New York the last five years
>
> Yours very truly and gratefully
>
> JOHN L BROWN M D

In the Peruna advertisement, which appeared in October, 1912, Hartman states, regarding the letter just given,

> I recently received such a letter

In each of his letters to those that wrote him asking for the name and address of the physician, Hartman said

> I have the doctor s letter in my office recently received

Now note the date of the letter "recently received" from John L. Brown—September, 1910! In other words, the letter had been in cold storage for more than two years! So much for Hartman's accuracy Now just a word regarding John L Brown Brown declares in his letter that he is, among other things (1) medical referee for his county, (2) a member of the Kentucky State Medical Association, and (3) a member of the American Medical Association The secretary of the Kentucky State Medical Association declares that Brown was never medical referee for his county nor was he a member of the Kentucky State Medical Association For the rest, we may say that Dr John L Brown, self admitted morphin addict, who was willing after he had "considered the matter carefully and prayerfully," to give a testimonial for Peruna—providing Hartman "came across"—is not, and never has been, a member of the American Medical Association

Correspondence

The Value of Tetanus Antitoxin

To the Editor —While the value of tetanus antitoxin in the prophylaxis of tetanus is generally accepted, its efficacy in combating the disease after symptoms have appeared is not so clearly demonstrated Some men are firmly convinced that tetanus antitoxin in large doses has been the means of saving patients suffering from tetanus, others are as certain that it does no good Most of the texts on medicine and surgery suggest antitoxin in the curative treatment of tetanus, but add that little benefit is to be expected from its use

It is scarcely necessary to refer to the importance in the prognosis of tetanus of the site and extent of the initial wound, of the incubation period, of the adequacy of local surgical treatment and of the various symptomatic remedies employed In those cases in which serum has been administered, the method of introducing the antitoxin whether subcutaneous, intramuscular intravenous, intraneural, subdural, etc, must be considered.

Since the outcome of this disease depends on so many variable factors quite independent of specific treatment, the study of the individual case or of a small group of cases affords practically no safe data for generalization Similarly, conclusions drawn from a collection of case reports from the literature will be misleading, for favorable cases are more often reported than unfavorable cases

The current view of the curative value of tetanus antitoxin is derived, of course, in part from animal experiment and in part from the larger collections of case reports One of the most extensive and frequently quoted of these reports is that of Anders and Morgan,[1] which included 949 cases from the literature (1850 1904) and 252 original cases obtained by correspondence with clinicians in this country From their study Anders and Morgan concluded that "the present status of the serum question leaves no room for doubting that when given during well-developed cases of tetanus, antitoxin has no appreciable beneficial effect, neither reduction of mortality nor hastening of recovery resulting therefrom "

Thus out of 140 patients treated without serum, 77 per cent died, of 112 patients treated with serum 63 4 per cent died A somewhat more detailed study of these statistics shows, however, that of the patients who were treated with serum, but who died, many received only small doses of serum (for instance, 20 or 40 c.c.) In the accompanying tabulation the cases are classified with respect to the amount of serum used

	Number of Cases	Mortality Per Cent
Total cases	252	71
Without serum	140	77
With serum—all cases	112	63 4
Serum in small amounts	71	70 4
Serum in large amounts (100 c.c. or more)	41	51

The incubation periods of the fatal and non fatal cases showed practically the same relation in this classification Conclusions drawn from such tabulations are of course open to criticism from several points, but these figures suggest that large doses may have a demonstrable beneficial action Moreover, most of the American statistics, including those of Anders and Morgan just quoted, were based on cases treated prior to 1905 In 1907 an American standard unit for tetanus antitoxin was promulgated by the Public Health Service[2] and since 1907 commercial tetanus antitoxin has been much more uniform in quality and of higher antitoxic value Thus in seven American serums examined by Rosenau and Anderson[4] prior to 1907, the antitoxic content varied from 77 to 769 units per cubic centimeter In five foreign serums the antitoxic content varied from 40 to 83 3 units per cubic centimeter

During the past five years, therefore, tetanus in the United States has been treated with serum of a more uniform value and it would seem desirable to ascertain by a compilation of results what may be hoped for in the treatment of tetanus with antitoxin of uniform grade

We recognize of course that much of the experimental evidence indicates that after tetanus toxin is fixed in nervous tissue, antitoxin is of little service in saving the life of an animal On the other hand, in a case of tetanus in man, it often is not possible to determine how far this intoxication of nervous tissue has progressed, by reference either to the incubation period, or to clinical symptoms Nor is it always possible to be certain that local surgical treatment has completely eradicated the source of the toxin That a limited intoxication is not necessarily fatal is proved by recovery in apparently hopeless cases

As the matter now stands, the general practitioner, when called on to treat a case of tetanus, refers to his texts, finds but scant encouragement for vigorous serum treatment and at best is likely to give but two or three doses of serum If the accumulated clinical results show that antitoxin adds nothing to the chances of recovery of the patient, the present pessimistic view is justified and we must continue to depend on symptomatic and local treatment, but if serum in large doses will save an occasional patient, it should be used as a routine with the other approved symptomatic remedies

A consideration of the facts given above suggests the reopening of the discussion of a rather old subject, regarded by many as settled, in the hope that the collected experience of the past five years may help to determine from clinical results the value of antitoxin to tetanus sufferers

Those who have treated cases of tetanus since 1906, either with serum or by other methods, are requested to communicate with me in care of the Memorial Institute for Infectious Diseases Blanks will be forwarded for recording the necessary data, and due credit will be given in the compilation to be made later

ERNEST E IRONS,
1743 West Harrison Street, Chicago

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1 Anders James M and Morgan Arthur C Tetanus THE JOURNAL A M A July 29 1905 p 314
2 Treasury Department Circular 61 October 1907
3 Bull 43 Hyg Lab U S Pub Health Service p 11

The Tariff on Surgical Instruments

To the Editor —At this time, when tariff revision promises to be the order of the day, would it not be a good idea for the American Medical Association to endeavor to secure the abolition, or at least reduction, of the heavy duty paid by the medical profession of the United States on surgical instruments? It is currently believed that this duty benefits merely two or three importing firms, and perhaps a similar number of instrument manufacturers in America, and this at the expense of the entire medical profession of this country I have understood although I cannot speak authoritatively in this matter, that there are one or two instrument importing houses in New York which import German surgical instruments in the rough—that is, not nickel plated—on which a duty of 5 per cent is charged, nickel plate these instruments and then stick on the 40 per cent. duty Furthermore, the manufacture of surgical instruments in America seems never to have attained to large proportions, and promises not to so do for many years, yet the medical profession must continue to pay this 40 per cent duty on instruments which half the time they use in performing charity operations Pertinent to this matter of American instrument manufacture, I recall that a year or so ago I wrote to a Chicago instrument house inquiring why they charged me $2 more for a certain kind of tonsil snare than did a New York instrument house The reply came that their instruments were hand forged, and not the cheap German imported instruments, but they had overlooked the important fact that both instruments bore the well known trademark of Fischer of Jena! So much for the home grown product Why should the medical profession of America, with all its political strength, submit to this tariff imposition?

RICHMOND MCKINNEY, Memphis, Tenn

Immunity in Pneumococcus Infections

To the Editor —In THE JOURNAL, Oct 12, 1912, there appeared an article by Dr J O Hirschfelder, of San Francisco, on active and passive pneumococcus immunity This article is a valuable communication and Dr Hirschfelder is to be congratulated on the resourcefulness and ingenuity of his experiments and deductions His work is of unusual interest to me since it parallels certain observations of my own, which have been in progress since November 1910 My own work has been concerned chiefly with studies of a group of organisms which has the common characters of autolysis and enzyme production, namely, the pneumococcus, the gonococcus and the meningococcus, and to a lesser degree the staphylococcus Of these organisms, the pneumococcus alone lends itself to animal experimentation, and the work of Rosenow and others has done much to clear up the nature of the autolytic processes and the chemical and biologic characters of the autolysates

The enzymes of this group of organisms, of which the pneumococcus may be regarded as the type, are proteolytic and appear to operate like enzymes of the tryptic variety, i e, best in slightly alkaline mediums It has been shown by Dick that at the time of crisis in pneumonia the blood shows the presence of a proteolytic enzyme, especially in those cases which go on to recovery, and the inference is drawn that this enzyme is the product of pneumococcus activity

My own observation has led me to believe that this contention is true Using the highly susceptible rabbit, I have been studying the effects of immunity conferred by inoculations of infected animals with pancreatin solutions alone, with pancreatic extracts of pneumococci, and with like extracts of pneumococci and staphylococci So far as these experiments have gone, the indications point to the following conclusions first, that pancreatin solutions alone are capable of producing immunity in infected and non infected rabbits, second, that filtered pancreatic extracts of pneumococci, and of pneumococci and staphylococci also, show immunizing and curative powers, third, that all three of these agents are capable of modifying favorably the course of pneumococcus infections in man

It is my intention shortly to report the experiments and data leading to the above conclusions concerning pneumococcus infection, and the no less important data and conclusions in regard to the nature and therapeutics of gonococcus infection

Carl C Warden, Los Angeles, Cal

Queries and Minor Notes

Anonymous Communications will not be noticed Every letter must contain the writer s name and address but these will be omitted on request

IRID FLORENT AND PULV MAYORANAE

To the Editor —In an abstract of an article by A Lorand on The Relief of Headaches by Inducing Copious Secretion from the Nose (The Journal Nov 16 1912 p 1834) two suggestions as to prescriptions are made I am unable to find two of the articles required in my local druggist s stock nor can I find them described in Dorland s dictionary or any materia medica at hand I refer to the pulv mayoranae and the irid. florent. both of which occur in the second prescription Please tell me what these items are and where they can be obtained I do not recognize them under this name

P T F

Answer —"Irid florent" is evidently the genitive of "iris florentina"—Florentine iris, or orris root "Pulv mayoranae" evidently refers to powdered marjoram leaves, which are obtained from *Majorana hortensis*, a plant somewhat similar to sage and used largely for culinary purposes The German names for marjoram are *Wurstkraut* (sausage herb), *Majoran* and *Matran* Marjoram leaves are found in many drug stores as well as in some groceries that cater to German trade If marjoram is not available, sage or some similar herb would probably answer the purpose

MEANING OF THE WASSERMANN REACTION

To the Editor —Please inform me just what a positive Wassermann test of the blood signifies when performed by a competent laboratory worker Does it mean that the patient is at the time of the test suffering from active syphilis and that he is in need of further treatment—treatment until the test becomes negative or does it merely mean that the patient has at some near or remote period in his past life had syphilis? Is a positive Wassermann test of the blood with no other discoverable evidence of syphilis an indication for active treatment? My understanding has been that a positive Wassermann test of the blood merely signifies syphilitic infection and that it is only temporarily influenced by treatment that it frequently becomes negative during the course of active treatment, but invariably becomes positive again soon after treatment is discontinued I would be glad to have an authoritative statement of the significance of a positive Wassermann test of the blood serum

Heber Butts Canacao P I

Answer.—According to the present consensus of opinion a Wassermann reaction found positive on repeated examinations by competent laboratory workers signifies that the individual has been infected at one period of his life with the *Spirochaeta pallida* and that he still harbors active foci of the syphilitic agent If this infection as in the great majority of cases has led to the clinical manifestations which we call syphilis, or if these manifestations have been absent (latent syphilis), the positive Wassermann test means that there are still syphilitic products and producers present and that immediate specific treatment is therefore called for It is of course erroneous to conclude that cases which show only slight clinical symptoms may be treated lightly The history of tabetics and paralytics shows only too often "light" cases of syphilis in which there are only slight secondary symptoms The treatment of patients who give a positive Wassermann reaction but who show no clinical manifestations of syphilis should be thorough and should include one course of inunctions each year and potassium iodid for several months each year until the Wassermann test, taken at intervals of six months, has remained negative for two years

As in other conditions antibodies may be present at a time when a disease has been cured, it is possible that a Wassermann test may be positive after treatment, though the patient is actually cured of his syphilis This positive Wassermann must after a certain time become negative spontaneously There is no evidence that antibodies may be present in high concentration years after an infection unless the infective agent is still harbored by the host The fact that the Wassermann test becomes positive after it has been negative for some time proves only that the treatment has been insufficient in its mode, in its duration, or in both

PREPARATION OF AUTOGENOUS VACCINES

To the Editor —Please tell me of a publication on the preparation of autogenous vaccines

E C Stevenson M D Dixon Ill

Answer —We find no book devoted to the preparation of autogenous vaccines, though chapters on this subject are found in several works The directions usually given for the preparation of autogenous vaccines are, in substance, as follows

Autogenous vaccines are mixtures of the organism, derived from the individual patient, which appears to have an etiologic relation to the disease The first step is therefore to determine the bacterial cause of the disease and obtain the organism in pure culture The organism must be as virulent as possible, and for this reason the isolation of the bacterium from the morbid material must be effected as rapidly as possible in as few generations as is consistent with obtaining it in a state of purity The culture of the vaccines to be used must be prepared under the most favorable conditions When the organism responsible for the given infection has been isolated from the lesion existing in the patient, it is planted on a suitable medium in a Roux or similar bottle to form mass cultures, and is incubated under optimum conditions for such a period of time as experience shows is calculated to yield the maximum number of vigorous living bacteria Salt solution is then added to the growth, a few cubic centimeters being usually sufficient, and the culture scraped off into the salt solution with a sterile glass rod or platinum loop The number of bacteria per cubic centimeter is then estimated by mixing equal volumes of defibrinated blood and bacterial suspension and then diluting about five times and smearing on a slide This is stained with a Romanowski stain and the number of red corpuscles and also that of the bacteria ascertained

Since the number of corpuscles in normal human blood is about 5,000,000 per cubic millimeter, by a comparison of the number of bacteria with the number of corpuscles in the field examined the number of bacteria per cubic centimeter can readily be estimated Having determined the numerical strength of the vaccine, a sufficient quantity of salt solution is added to the emulsion to reduce the numbers in each cubic centimeter to 1 000 or 100,000 000, or to whatever quantity is selected as the standard, and the mixture is well shaken The tube is then suspended for a period of thirty minutes in a water bath kept at a temperature corresponding with the thermal death point of the bacterium employed for the vaccine, for example, from 59 to 60 C (138 2 to 140 F) for *Staphylococcus aureus* After removal from the water bath loopfuls of the emulsion are sown on suitable mediums and incubated in order to determine the sterility of the vaccine Finally a small quantity of some antiseptic, such as 0 5 per cent phenol, or 0.25 per cent trikresol is added to the vaccine, which is then put up in small bulbs or rubber capped bottles for use

THE INCOMPATIBILITIES OF HEXAMETHYLENAMIN

To the Editor —I have been an interested reader of the various discussions on hexamethylenamin that have appeared in The Journal during the last few years No one of the articles that I have read however has touched on the subject of its compatibility with other drugs Please give me some light on this subject.

W H Conner M D., Gilbert Minn.

Answer.—The incompatibility of hexamethylenamin with sodium acid phosphate, due to the acidity of this salt, was discussed in The Journal, Nov 2, 1912, p 1640 The fact that its solutions are decomposed by acids was discussed in The Journal, Nov 30, 1912, p 1989 Other incompatibles are tannic acid and mercuric chlorid, which precipitate hexamethylenamin.

LITERATURE ON PELLAGRA

To the Editor —Please refer me to articles and books on the signs and symptoms of pellagra which have been published since June 1911 H C ——— Miss

Answer —In this department, Sept 28, 1912, p 1205, appeared a list of Journal articles on the etiology, symptoms and treatment of pellagra The following list includes later Journal articles and books and articles that have appeared elsewhere

Wood Edward Jenner A Treatise on Pellagra Price $4 D Appleton & Co New York 1912
Roberts Stewart R Pellagra History Distribution Diagnosis Prognosis Treatment Etiology Price $2 50 C V Mosby St Louis 1912
Threlkeld A E. Pellagra *Kentucky Med Jour* June 1912
Lennington M Pellagra *Kentucky Med Jour* July 1912
Ravitch M L. Plea for Earlier Diagnosis of Pellagra The Journal July 6 1912 p 33
Dean C H Three Cases of Pellagra *Boston Med and Surg Jour* July 18 1912
Ravogli A Case of Pellagra *Lancet Clinic* August 1912
Lavinder C H Clinical Aspects of the Pellagra Question *South Med Jour* August, 1912
Niles G M Rôle of Psychotherapy in Pellagra *Virginia Med Semi Month* Aug 23 1912
Snyder J R Pellagra in Children *Am Jour Dis Child*, September 1912
Rush D J Pellagra *Mississippi Med Month* September 1912
Trettar J J Pellagra *Jour Kansas Med Soc* September 1912
Pellagra in Illinois Condensed Report of Illinois Pellagra Commission *Arch Int Med* September 1912
Dyer I Treatment of Pellagra *New Orleans Med and Surg Jour* October 1912
Ormsby O S Pellagra *Jour Cutan Dis* October 1912.
Hoag D E Nervous Manifestations in Pellagra The Journal Oct 19 1912 p 1445
Phenomena of Anaphylaxis in Pellagra Patients Inoculated with the Watery Extract of Spoiled Maize The Journal Oct 19 1912 p 1480

DIFFERENTIATION OF MEASLES AND GERMAN MEASLES

To the Editor —Considerable discussion has arisen here as to the etiologic differentiation of measles and German measles Please give me any information or literature Can a person with German measles infect a second person with measles?

J W Warren, M D Plymouth Mich

Answer.—So far as is at present known, German measles (rubella or rötheln) and measles (rubeola or morbilli) are distinct diseases Recent investigations have shown that it is possible to communicate measles to apes and monkeys and some important facts have been learned regarding the character of the virus but we do not know that any similar experiments have been made with the virus of German measles According to the prevailing opinion a person sick with German measles would not communicate any other disease than German measles He would not infect a second person so that the second person would develop genuine measles

DATE OF INTERNATIONAL MEDICAL CONGRESS

To the Editor —Some time ago I read in The Journal of the medical meeting to be held in London next August Since then I have seen nothing in regard to it. I should like to attend this meeting We are but twelve days now from London nearer than the physician in San Francisco

M S Stewart M D East Gate Seoul Korea

Answer —The Seventeenth International Medical Congress will be held in London, Aug 6 12, 1913 Information concerning the congress was given in The Journal, Feb 3, 1912, p 356, and July 27, 1912, p 285

PROLONGED ALKALINE TREATMENT OF HYPERCHLORHYDRIA

To the Editor —In The Journal (Nov 23 1912 p 1910) M T R. shows that he believes in sodium bicarbonate for hyperchlorhydria Please in your query column draw his attention to the following

℞ Magnesia calcined gr v
Bismuth subnitrate gr x

This was prescribed for me three years ago and its continued daily use has wrought no harm but unqualified happiness.

T R C

INFORMATION DESIRED ON HABITUAL SUBNORMAL TEMPERATURE

To the Editor —I am interested in habitual subnormal temperature I have a few patients under observation who show a daily range of temperature from 95 to 98 degrees All these patients while in a state of low vitality are attending to their usual employment I wish to tabulate and compare the symptoms connected with this condition and therefore ask for information with regard to such cases

N R. Gordon M D Springfield, Ill

PREGNANCY AFTER OOPHORECTOMY

To the Editor —I am interested in the subject of pregnancy after oophorectomy and would appreciate certain information from those who have had cases of this kind The information desired involves the question of the relief of sterility following this operation the character of the labor where pregnancy has occurred the indications for removal of the ovary, the pathologic condition any other operations done at the same time the character of the menstrual periods subsequent to the operation and the date of birth and sex of subsequent children A blank form will be forwarded in reply to a post-card request

George W Kosmak M D
23 East Ninety Third Street New York City

Medical Economics

This Department Embodies the Subjects of Post graduate Work Contract Practice Legislation Medical Defense and Other Medicolegal and Economic Questions of Interest to Physicians

GOOD HEALTH A BUSINESS PROPOSITION

Reference has previously been made to the excellent work being done in the education of the public by some of our large life insurance companies One of the most conspicuous examples is the Equitable Life Assurance Society, which has established a department of conservation, devoted to the prevention of disease and the prolongation of life among its policy holders It also issues a magazine entitled *The Human Factor* to its policy holders In a recent issue of this magazine appear some striking statements from an address by Mr E E Rittenhouse[1] the conservation commissioner of the society, before the International Conservation Congress, held at Indianapolis, Oct 2, 1912 which are worth quoting not only for the facts themselves but for the impressive way in which they are put Mr Rittenhouse said

"Our birth rate is declining Over 200,000 infants under age 5 die annually from preventable disease

'Of the 20 000 000 school children in this country not less than 75 per cent need attention for physical defects which are prejudicial to health

'The alcohol and drug habits are constantly adding to the degenerate list and the death roll

The diseases of vice are spreading, and we lack the moral courage to openly war against them

"Insanity and idiocy are increasing at an alarming rate

Suicides now reach the enormous total of 15,000 annually

Over 9 000 murders are committed every year in the United States Only about 116 murderers are executed for these crimes Our homicide rate is appalling—about 100 per million population, against 13 in Canada, 9 in Great Britain, 15 in Italy

'The diseases of old age are reaching down into middle life and below Our vital organs are wearing out too soon We have had an increase of over 100 per cent in thirty years in the death rate from diseases of the heart, blood vessels and kidneys, including apoplexy These diseases claim over 350 000 Americans annually Sixty per cent of them are preventable or postponable if detected in time

Cancer destroys nearly 75 000 lives annually The loss from external cancer alone has increased 52 per cent. in ten years

'Pellagra a deadly plague, is increasing in the South, but it excites little or no public concern

'Over 135 000 lives are taken by pneumonia, chiefly as a result of weakened resistance from degenerative disease

'Over 150,000 die annually from the preventable plague, tuberculosis Nearly a million tuberculous victims are constantly spreading the malady to the well, with virtually no official supervision or restraint

"Over 25,000 are killed and 300 000 attacked annually by the preventable filth disease typhoid fever Other germ diseases carry off more people than tuberculosis and typhoid combined

'Over 90 000 Americans are killed annually by accidents and other violence, and the loss is steadily increasing

"Over 1,500 000 people are constantly ill from preventable disease Over 6,000,000 people will die from preventable cause during the next ten years at the present loss rate

'The sum of $1,500 000 000 is a low estimate of the annual economic loss from preventable deaths

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[1] Ritten [illegible] E. [illegible] ab tr., The [illegible]

"Our cities spend six and a half times as much to prevent fire waste as they do to prevent life waste, although the money loss from life waste is six times greater

"These are the conditions we are asking our people to correct Is there anything unreasonable in this request?"

By way of contrast to the somber picture given of conditions in this country, are the striking statements made in the first article in the number, under the title, "Our Life Saving Triumph of Panama," in which the work of the Sanitary Department of the Canal Zone for the last seven years is summarized

"Col William C Gorgas and his sanitary corps were charged with an extraordinary task. They undertook to drive from the pest ridden seaports, jungles and marshes of the Canal Zone the deadly fevers and other diseases which have scourged the Isthmus for 400 years Their success has challenged the admiration of the world

"They have transformed the world's greatest plague spot into a zone of salubrity and health They have given civilization most convincing proof that sanitarians can conserve human life even under the most appalling difficulties, *when they are given money and the authority to do it*

"Every American should know the story of what has been done From the statements and reports of Colonel Gorgas we learn the following

"Yellow fever has been banished—no case has occurred for six years

"The annual deaths per ten thousand employees from principal diseases has been reduced under American control (since 1904) as follows From dysentery 25 8 to 2 6 From tuberculosis 15 3 to 4 7 From malarial fevers 87 9 to 9 6 The annual malarial sick list has been reduced from 821 to 187 per thousand employees

'During the first nine years of French control the general death rate was 241 per thousand employees annually (That mosquitoes spread fevers was not then known)

'Under American control it has come down from 41 7 in 1906 to 11 0 in 1911

'The average number of employees under French control was 10,200, and the deaths were 22,189 During nearly the same length of time under American control, the average employed was 33,000 and the deaths were less than 5,000

"The general death rate in Panama, Colon and the Canal Zone has been reduced from 48.3 per thousand population in 1906 to 21 4 in 1911

'Could the American people ask any more convincing evidence that public health is purchasable?

'It is simply a matter of dollars and authority The cost of accomplishing these wonderful results on the Isthmus has been about $2 43 per person annually in the zone affected This is less than Key West spends annually for its fire department, where the death rate (22.5) is higher than it is in Panama

Are the lives of the white and black people of the Isthmus of any more value than the lives of the white and black people of the states?

"If Colonel Gorgas, under the most extraordinary difficulties, can conquer the diseases due chiefly to the mosquito and fly pest, why can it not be done in American cities where the obstacles to overcome are relatively trifling and the cost much less?

If we know how to change the deadly swamps and jungles of Panama into healthful abodes for man, what excuse have we for not applying the same knowledge to its full extent to American communities?

'It is difficult to realize that Panama, the former pest hole of the tropics, is now more healthful than a number of American seaport and river cities

'Compare the Panama death rate of 21 4 with that of Charleston, S C (1910 census) 29 7, Savannah 26 9, Mobile 23 0, Richmond 22 6, Key West 22.5, Memphis 21 4, New Orleans 21 3, Washington, D C, 19 6, and with the many other wealthy and prosperous American cities where the death rate is from 15 to 20 And there are scores of towns and cities in the United States with virtually no public health service

'Colonel Gorgas has emphasized the fact and placed it squarely before the American people, that the excessive death rate from preventable disease in our communities is nothing short of a communal crime"

One could hardly ask for a better demonstration of the fact, now being recognized, that good health is a purchasable commodity, and that sickness can be insured against and prevented if the public is willing to pay enough for safeguards

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DELAWARE State Society and Homeopathic Examining Boards Dover and Wilmington December 10 12 Secretary of the Medical Council Dr Henry W Briggs 1026 Jackson St. Wilmington

KENTUCKY The Armory Louisville December 12 Sec., Dr J N McCormack Bowling Green

MARYLAND Regular 1211 Cathedral St Baltimore, December 10 Sec. Dr J McPherson Scott Hagerstown Homeopathic St. Luke's Hospital Baltimore December 13 14 Sec Dr O N Duvall 1326 N Mount Street

OHIO Columbus December 10 12 Sec Dr George H Matson, State House

VIRGINIA Richmond, December 17 20 Sec Dr Herbert Old Norfolk.

Georgia Board Upheld in Right to Refuse to Examine Graduates of Certain Colleges

The mandamus case brought by the Southern College of Medicine and Surgery against the Board of Medical Examiners of Georgia was called for trial in the superior court recently, but as no one was present for the college except the local attorneys, and as they refused to try the case, it was dismissed. This case was brought several months ago to compel the board to examine the graduates of this college The case was first heard by Judge Morris, was then taken to the supreme court by the college and later came back for trial before a jury, but, as stated above, the case was dismissed The board had refused to examine the graduates of the college on the ground that the college was not equipped properly, and was graduating its students before they had completed the course required by law It is supposed that the dismissal of the case will end the litigation over the matter

Louisiana Homeopathic November Report

Dr Edward Harper, secretary of the Homeopathic State Board of Medical Examiners of Louisiana, reports the written examination held at New Orleans, Nov 4 5, 1912 The number of subjects examined in was 10, total number of questions asked, 100, percentage required to pass, 75 Only one candidate, a graduate of the University of Michigan Homeopathic College, 1912, was examined and he passed with a grade of 82 5 per cent

New Jersey October Report

Dr H G Norton, secretary of the New Jersey State Board of Medical Examiners, reports the written examination held at Trenton, Oct 15 16, 1912 The number of subjects examined in was 9, total number of questions asked, 90, percentage required to pass, 75 The total number of candidates examined was 34, of whom 25 passed and 8 failed For one candidate the results are not published because of failure to furnish proper preliminary credentials The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Howard University Washington D C	(1912)	88
University of Louisville	(1910)	80 5
University of Maryland	(1906)	76
University and Bellevue Hospital Medical College	(1912)	81 84 84 2 85 1 80
Cornell University Medical College	(1910)	85 5
Columbia University College of Phys and Surg	(1912)	80 9
New York Homeopathic Medical College and Flower Hospital	(1911)	82 86 (1912) 77
Eclectic Medical College of the City of New York	(1912)	77.5
Univ of Pennsylvania (1880) 82 (1911) 80 1	(1912)	79 6
Jefferson Medical College (1911) 81 5	(1912)	78 80 1, 80 4
Medico-Chirurgical College, Philadelphia	(1912)	80 4
Women's Medical College of Pennsylvania	(1912)	79
McGill University Quebec	(1903)	80.5
University of Naples Italy	(1905)	78
FAILED		
University of Louisville	(1911)	73
University of Maryland.	(1910)	72.5
Harvard Medical School	(1912)	73 4
Eclectic Medical College of the City of New York	(1912)	70
University of Naples Italy (1893) 54.8 (1895) 67 4	(1903)	68 2 (1908) 69

Book Notices

Mind Cure and Other Essays By Philip Zenner A M M D Cloth Price $1 25 net Pp 160 Cincinnati Stewart & Kidd Company 1912

The subjects of mind cure, alcoholism, social diseases, the medical inspection of schools, the training of children, defectives and delinquents, and the betterment of the race through the science of eugenics are much in the minds of thoughtful men and women at present, and constitute problems in preventive medicine to which leading members of the profession are devoting their attention In this little volume Dr Zenner has treated these subjects in a sane, clear and forceful manner In the essay on mind cure he vigorously arraigns the quack and the nostrum vender with their vast and fraudulent pretensions, and calls attention to the shortcomings of osteopathy and the inadequacy and danger of the Christian Science cult and its pretensions in the cure of disease In the essays on the training of the child, the prevention of alcoholism and the social diseases he speaks clearly and practically on the need for education in these matters and the building of character in the young, in which lies the best hope of progress Eugenics and the problems of the defective and the delinquent are treated in the same enlightened, sensible manner, and for the handling of the latter he offers a practical method in the school of truancy which he was instrumental in establishing in his home city This is a sensible book on vital subjects and should interest every thoughtful person

The Medical Directory of New York New Jersey and Connecticut Volume XIV Cloth Price $2 50 Pp 821 New York Medical Society of the State of New York 17 W Forty Third Street 1912

The fourteenth volume of this directory is similar in style to those already issued and contains the names of 17,764 physicians of whom 13,696 are in the state of New York, 2,674 in New Jersey and 1,394 in Connecticut Of the 13,696 physicians credited to New York state, 5,159 are in Manhattan and the Bronx, 1,927 in Brooklyn, 213 in Queens and 66 in Richmond making a total for Greater New York of 7,365, leaving a balance of 6 331 as the medical population of the remainder of the state The directory contains only the names of registered physicians

The Vanishing Man A Detective Romance By R Austin Freeman Cloth Price, $1 25 net Pp 351 New York Dodd Mead & Co 1912

An excellent detective story of medicolegal character, the plot being based on the identification of bones The character sketching is good and the plot ingenious, while the love making between the physician narrator and the heroine suspected of murder is altogether satisfactory The story will be found not horrible or thrilling, but absorbing and entertaining

The Medical Record Visiting List or Physician's Diary for 1913 Leather Price $1 50 New York William Wood & Co

This admirable visiting list possesses the advantages of neatness and compactness It fits easily into the pocket and contains the tabloid information found ordinarily in publications of this character The blanks are in various forms for making conveniently the necessary records of visits and charges and for other data such as births, vaccinations, etc

Medicolegal

Inoculation With Venereal Disease Cruel Treatment of Wife

(Carbajal vs Fernandez (La) 58 So R 581)

The Supreme Court of Louisiana affirms here a judgment for the plaintiff in what it says was the suit of a young wife, chaste and pure, for a separation from bed and board on the ground of cruel treatment, consisting in having been inoculated with both gonorrhea and syphilis by her husband The defense was that the infection might have been communicated in other ways than by sexual commerce Possibly so, but the defendant (barely 20 or 21) *suffered from these diseases before* his marriage and was treated for them some six months before his marriage, and no later than three days before his marriage he consulted a physician to be informed whether in the opinion of the physician he had been cured, and marriage was safe The expert testimony showed that if contracted from commerce the diseases would first appear where they did in fact, manifest themselves As to whether the communication of a venereal disease constitutes cruel treatment, the brief of the defendant said The evidence unquestionably shows that plaintiff is afflicted with syphilis, that disgusting and terrible disease that carries in its wake untold physical and mental pain and anguish Defendant's earnest sympathy is extended to the plaintiff, whose suffering and humiliation have, unquestionably been great" Indeed all the courts agree on that point The only difference of opinion is as to whether it is necessary that the husband should have been aware of his condition In the present case the defendant had this knowledge or which is the same thing should under the circumstances have had it Wherefore, the judgment for the plaintiff is affirmed

Letting Drain Get Lost in Wound

(Evans vs Munro (R I) 83 Atl R 82)

The Supreme Court of Rhode Island approves of an allowance of $1,250 damages to the plaintiff on account of the defendant having permitted a drain to get lost and remain in the wound after he had performed an operation for the removal of a tumor from her breast The court says that there was no merit in any of the exceptions of the defendant There was no question but that the plaintiff was in the exercise of due care during the operation performed on her by the defendant, and thereafterward while under his care, and that it was through no fault of hers that the drain disappeared and was lost within the incision made by the defendant, and remained within the wound in her breast, which healed by first intention As such drains are not ordinarily permitted, in the exercise of good surgery, to remain within the body of a patient after a wound has so healed, proof of the fact that the drain in question was left by the defendant in the breast of the plaintiff imposed on him the burden of explaining that its presence there was not due to his negligence in the premises The damages awarded were not so large as to shock the conscience of the court, or to indicate that the verdict of the jury was actuated by passion, prejudice, or other improper motive Therefore, the defendant's exceptions are overruled and the case remitted to the superior court, with direction to enter judgment on the verdict for the amount above stated

Prohibition Against Disclosures Is Absolute

(Well vs Well (N Y), 136 N Y Supp 190)

The First Appellate Division of the Supreme Court of New York affirms an order dismissing an uncontested action for the annulment of a marriage because, it says there was no legal evidence of the existence of the disability of which the plaintiff complained There was evidence given by a physician, but that was clearly incompetent, and should not have been received Section 834 of the New York Code of Civil Procedure provides that a physician "shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity" That was precisely what the physician was allowed to do in this case It was of no consequence that the defendant was not present to object to the evidence The Code does not provide that such evidence may be received if not objected to The prohibition is absolute, that the physician shall not be allowed to testify, and it remains effective, unless the provisions are expressly waived on the trial by the patient The court should have refused to receive the evidence, and, if it was received inadvertently, should have disregarded it

Society Proceedings

COMING MEETINGS

American Association of Anatomists Cleveland, Dec 31-Jan 2
American Physiological Society, Cleveland, Dec 26 28
Southern Surg and Gynec Assn Old Point Comfort, Va Dec 17 19
Western Surgical and Gynec Assn, Cincinnati, Dec 20 21

SOUTHERN MEDICAL ASSOCIATION

Sixth Annual Meeting, held at Jacksonville, Fla, Nov 12 14 1912

(Continued from page 2000)

Empiricism in Medicine

Dr H H **Martin**, Savannah, Ga If we must use drugs in our practice, we have the U S Pharmacopeia, the National Formulary, and the list of new and nonofficial remedies which have been examined and approved by the Council on Pharmacy and Chemistry of the American Medical Association We should withdraw our support from the so called remedies and cures which are manufactured or compounded for the sole purpose of making money and not for the purpose of healing the sick Let us, as medical men, entrusted with the health and lives of our fellow men, come to a fuller realization of our duties and responsibilities Let us shake off the superstitions and absurdities of empiricism, let us draw a sharper line between scientific and empiric medicine with "no compromise" as our slogan Let us exclude from our offices the voluble "detail man" and his wares, and the medical journals which are allied with the proprietary interests Let us also endeavor to have established, if necessary, one or more drug stores in every city and town in this country where drugs are dispensed on prescription only Let us endeavor to secure the enactment of a law in each state that will make the newspaper proprietor just as responsible civilly and criminally for the advertisements that go into his paper as he is for any article in the news columns

The Thyroid and Hyperthyroidism

Dr **Stuart McGuire**, Richmond, Va A patient with exophthalmic goiter ought to be kept under observation and carefully studied for some days before the surgeon decides on the character of the operation best suited to the individual and the safest time to perform it In the hands of experts, the mortality of operations for hyperthyroidism is now from 2 to 5 per cent, and 85 per cent of those who recover may be said to be symptomatic cures It is neither honest nor expedient to make light of the operation or to belittle its difficulties and dangers After a successful operation for hyperthyroidism the improvement in the patient is immediate and marked No operation in surgery produces such quick and brilliant results Tremor disappears, the pulse falls to normal, the eyes become less and less wild, and restlessness and irritability are replaced by quiet and composure The wound, as a rule, heals rapidly, and the patient is able to leave the hospital in from ten to fourteen days Though the patient is well from the operation, and though the acute symptoms are relieved, the patient should not return immediately to the ordinary activities of life It requires approximately the same time to recover from exophthalmic goiter as from a nervous breakdown from other causes A successful operation should be followed by an adequate period of rest

Vaccine Therapy

Dr. **Irvin E Colgin**, Waco, Texas The most uniform results obtained from the use of vaccines are in cases of pyogenic infection, especially those caused by staphylococci, such as furuncles and carbuncles This is due to two factors, the chronicity of the infection and the *uniformity of the* causative organism Success has also been the rule in treating cases of acne vulgaris In vaccine therapy success depends on (1) choice of cases applicable *to the use of* bacterial vaccines, (2) determination of the causative factor (do not depend on mixed vaccines, as usually if you eliminate the main factor Nature can take care of the balance of infection), (3) selection of the dose according to individual patients (do not follow set rules), (4) the interval between injections (make it long enough to let the body respond to the stimulation)

DISCUSSION

Dr. **J B Elliott, Jr**, New Orleans My results in the treatment of typhoid fever by the use of typhoid vaccines have been uniformly successful The cases have all terminated about the twentieth or twenty second day, and after three doses of vaccine have been given the temperature has generally fallen to normal I have failed to see any harm done in any case by the use of typhoid vaccines

Hydrothorax in Its Relation to Cardiorenal Lesions

Dr. **Frank A Jones**, Memphis, Tenn Hydrothorax is often an acute condition instead of part of a general dropsy Acute nephritis is often ushered in by an attack of acute edema of the lungs, followed rapidly by acute fulminating hydrothorax In all probability, the edema of the lung followed rapidly by hydrothorax is due to the same toxic agencies which, at the same time, produce the renal changes In these cases passive congestion, venous stasis, etc, have nothing to do with the production of the edema, the large black lung is analogous to the large red kidney When dyspnea is marked, either in cardiac or renal lesions, the patient should be examined for hydrothorax just as critically Hydrothorax, massive in nature, is often latent Saline cathartics and digitalis, when hydrothorax is present to any appreciable degree, are dangerous They invite edema of the lungs and paralysis of the heart

Relation of Gas Embolism to the Production of Artificial Pneumothorax

Dr **Stevens T Harris**, Highlands, N C The results of no other method ever employed can compare with the wonderful results obtained by this procedure It is the only real curative treatment for phthisis ever devised Artificial pneumothorax, like other surgical methods, has its dangers, of which the chief is gas embolism Nearly all the deaths due to the treatment have been caused by this condition The chances for gas embolism are remote after you have definitely proved that the pleura is free and that more or less of a cavity has been formed We have never seen it occur when this is the case, except when there were a thickened pleura and some adhesions, and when too high a pressure was suddenly produced.

Some Economic Questions Related to Syphilis

Dr **Isadore Dyer**, New Orleans Hospitals for syphilis should be established in every state, not as an incentive to vice, but as a deterrent If syphilitics were required to be hospitalized for the treatment of their disease, it would reduce the occurrence of syphilis and would encourage proper treatment While treatment may be of great importance, of more importance is the study of the ways and means to educate the profession and the public in the care and in the prevention of syphilis and its consequences

Hygiene of Syphilis

Dr **Oscar Dowling**, New Orleans As a preventive measure segregation of the prostitute class, while unsatisfactory and undoubtedly a legalization of vice, affords opportunity for medical supervision and treatment Stringent, practical regulations, humane, adapted to local conditions, and rigidly enforced, would give results worth the effort involved. But to be effective, there should be no favor, no laxity, no escape Certainty and justice should be the keynotes The best means of getting rid of syphilis or any similar disease is to educate the people by energetic, practical work Vigilance in the control of bad practices, activity in the practical things pertaining to home life, enforcement of every health ordinance and regulation are means which spread the gospel of cleanliness and health The hygiene of syphilis is the same as the hygiene of other contagious diseases From its nature, specific work should be done to enlighten every one as to its origin and to correct the false notion that it is contracted in one way

Treatment of Chronic Laryngeal Stenosis

Dr Homer Dupuy, New Orleans When a laryngeal stenosis is the result of hyperplastic changes, some form of dilatation is the most logical method of overcoming it Gradual, systematic dilatation by intubation offers favorable prospects of success The tube with a low retaining swell and a wide head would seem to meet a want in the treatment of this form of stenosis In children, hypertrophic laryngitis is largely responsible for a chronic laryngeal stenosis In this particular affection tracheotomy is more apt to induce connective tissue changes than to effect a final cure

(To be concluded)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Insanity, Baltimore

July LXIX No 1 pp 1 265

1 Sociologic Aspect of Insanity and Allied Defects H Work Pueblo Colo
2 Alzheimer s Disease S C Fuller and H I Klopp Westborough Mass
3 *Some Problems in Heredity in Mental Diseases H A Cotton Trenton N J
4 Unilateral Hypertrophy Involving Entire Left Side of Body P Bassoe, Chicago
5 Plan for Indexing Cases in Hospitals for Insane W A White and F M Barnes Washington D C.
6 Biography of Patient with Paranoid Dementia Praecox C W Burr Philadelphia
7 *Prognostic Value of Hallucinations in Manic Depressive Psychoses. E. M Pease Waverley Mass
8 *Association in Feeble-Minded and Delinquent Children F C Eastman and A J Rosanoff Kings Park N Y
9 *Clinical Interpretations of Serologic Content of Blood and Cerebrospinal Fluid with Reference to Cytology and Chemistry of Latter in Mental Diseases M. J Karpas New York
10 Introductory Histopathologic Study of Paraplexus in Psychoses J A F Pfeiffer Washington D C
11 How Long Has Pellagra Existed in South Carolina? J W Babcock Columbia S C

3 **Heredity in Mental Diseases**—No attempt is made by Cotton to give any definite conclusions regarding the hereditary factors in the various psychoses He reviews some of the most important work done so far and outlines the methods to be pursued to obtain the best results in future work He also speaks of some of the difficulties to be met with, especially when analyzing the material as it comes from the field workers, and emphasizes the necessity of maintaining an open mind regarding these problems, and not to be too biased in attempting to make the facts fit the Mendelian laws At the same time, he recognizes that a comprehensive knowledge of the laws will assist materially in analyzing data and in arriving at practical conclusions He also feels that much valuable material will be obtained which will aid in solving the problems of prophylaxis and prevention of mental diseases An excellent bibliography is appended to Cotton's paper

7 **Hallucinations in Manic Depressive Psychoses**—In 800 cases in which the histories were studied by Pease, 219 or 27 3 per cent had hallucinations Of the 219 hallucinating cases 122 or 55 7 per cent recovered Of the 581 non hallucinating cases 298 or 53 4 per cent recovered It was found that these 800 cases represent only 609 persons Of the 609 persons, 182 or 29 9 per cent had hallucinations Of the 182 hallucinating persons 99 or 54 3 per cent recovered Of the 427 non hallucinating persons, 192 or 44 9 per cent recovered So far as hallucinations have any prognostic value at all, Pease says they indicate (1) a slightly better prognosis for the attack, and (2) a somewhat greater liability to recurrence of attacks But (3) the differences in percentage between the hallucinating and the non hallucinating cases is so slight as to suggest that if data from a much larger number of cases could be obtained these differences might disappear, in which case hallucinations would have no prognostic value.

8 **Association in Feeble Minded and Delinquent Children.**—The material of this study consists mainly of test records which have been obtained from 253 subjects All subjects were selected on the basis of backwardness in studies as rated by the teachers, the majority are also delinquents, having been committed on charges of truancy, disobedience, running away from home, theft, burglary, assault, etc In their ages 233 of the subjects range from 11 to 17 years, almost all the remaining twenty being one or two years below or above this range The conclusions arrived at are (1) that states of arrested mental development present certain fairly characteristic associational tendencies (2) These tendencies are characterized mainly by failures of reaction, non specific reactions, and certain types of individual reactions (3) The association test, as employed in the authors' study, is an aid in the diagnosis of feeble mindedness

9 **Cytology and Chemistry of Cerebrospinal Fluid**—In order to make a complete laboratory report of neurologic or psychiatric validity Karpas says it is essential to examine the blood and fluid for complement deviation, and, in addition to this, cytologic and chemical tests of the cerebrospinal fluid should be made An examination of the blood alone will throw no light on the psychiatric or neurologic diagnosis It must be also emphasized that in suspicious cases, several examinations of the blood and fluid should be performed The 100 cases of general paralysis studied by Karpas gave in 63 per cent a positive Wassermann in the fluid and blood, 7 per cent revealed a positive Wassermann only in the blood, in 16 per cent the Wassermann reaction was present only in the fluid, in 4 per cent of the cases, the Wassermann test in the blood and fluid was negative He has had no experience with incipient cases of general paralysis, forty nine out of seventy two cases were fully developed and only seven of twenty two general paralytics were in the last stage Some of the cases gave a negative Wassermann test in the blood, also there are other instances in which the Wassermann test was negative in the fluid, and again there are cases which show a negative Wassermann reaction both in the blood and fluid, and these findings bore no relation to the course and progress of the disease process In all cases, except two, lymphocytosis was demonstrated with varying intensity, but no distinct parallel with the course of the disease could be established In the majority of cases the four reactions were, as a rule, present Karpas is convinced that the cytologic reaction plus the globulin content are of profound significance and are always indicative of an organic process in the central nervous system In two cases of cerebral syphilis, which were confirmed by post mortem examination, the Wassermann reaction was present in the blood but not in the fluid, and globulin increase and lymphocytosis were manifested In chronic syphilitic endarteritis of a non active process and apparently healed gummata, the blood gave a complement deviation, the fluid was negative for Wassermann test, globulin was not increased and the cell count was very low, only three lymphocytes per cubic millimeter In other cases, in which the syphilitic process was relatively young or active, the results were the same as those obtained by Plaut The four reactions were not present in the two cases of tabes The alcoholic psychoses present no pathologic phenomena in the fluid however in some of the cases Wassermann reaction was present in the blood and in some instances a history of syphilitic infection was obtained Likewise arteriosclerotic and senile mental diseases and functional psychoses (such as dementia praecox, manic depressive insanity, etc) gave similar results In epileptic psychoses as a rule, neither the blood nor the fluid reveals abnormal constituents Three of twenty two cases of epileptic psychoses on the first examination showed some abnormal phenomena in the blood and fluid Under anti syphilitic treatment these pathologic manifestations disappeared The [illegible] laboratory cannot be considered as the ultimate [illegible] a for deciding disputed diagnosis of border [illegible] observations cannot be undermined, [illegible] can not be ignored, and the [illegible] phenomena should be [illegible] results can only be utilized

American Journal of Obstetrics and Diseases of Women and Children, York, Pa

November LXVI, No 419, pp 709 908

12 End Results with Various Operative Procedures for Procidentia and Extensive Cystoceles Prior and Subsequent to Menopause H N Vineberg New York
13 Interposition Operation for Prolapse of Uterus. Kolpohysterorrhaphia ' I S Stone Washington D C
14 Dystocia in Case of Uterus Didelphys M L Edward New York
15 Aneurysm of Uterine Artery H W Lawson, Washington, D C
16 Heart Disease in Pregnancy O Tuszkai Marienbad, Austria
17 Additional Cases of Nephro Ureterectomy Removal of Large Suppurating Kidneys G H Noble Atlanta Ga
18 Nature and Treatment of Vasomotor and Trophoneuroses L P Clark New York
19 *Maternal Feeding J P Sedgwick Minneapolis.
20 Ophthalmia in New Born A W Tallant Philadelphia
21 Care of Nose and Throat in Children H Hays New York
22 Marantic Infant. G F Little Brooklyn
23 Case of Streptococcus Empyema Complicated by Erysipelas A. Hymanson New York
24 Short Spica in Treatment of Hip Joint Disease C R Keppler Elizabeth N J

19 Abstracted in THE JOURNAL, November 9, p 1737

Bulletin of Johns Hopkins Hospital, Baltimore

November XVIII No 261, pp 322 352

25 *Aid for Diagnosis of Conditions Associated with Obstruction to Outflow of Blood from Brain with Special Reference to Sinus Thrombosis of Otitic Origin S J Crowe Baltimore
26 Chloroform Poisoning R E Mosiman and G H Whipple Baltimore
27 *Clinical and Bacteriologic Studies on Endocarditis Lenta R H Major Baltimore.
28 *Effect of Scarlet Red on Defects in Mucous Membrane of Stomach J S Davis and C D Deming Baltimore.
29 Subluxation of Major Cornu of Hyoid Bone (Dysphagia Valsalviana) F Hazlehurst Baltimore

25 **Diagnosis of Conditions Associated with Obstruction to Outflow of Blood from Brain.**—Experience has led Crowe to conclude that any acute obstruction to the outflow of blood through the sigmoid sinus, jugular bulb or internal jugular vein on one side may be diagnosed by means of the following test 1 No appreciable evidence of stasis is seen in the retinal or supra orbital veins when one internal jugular is compressed with the finger 2 Pressure on both internal jugular veins at the same time produces a marked dilatation of the veins of the fundi and of the anastomotic vessels connecting the intracranial with the extracranial venous circulation 3 When the pressure is suddenly released on one side, while it is maintained on the other the engorged veins of the anastomotic system and the fundi will immediately empty If the results in any individual case differ markedly from those above, Crowe says, it must be concluded that there is either an anomaly of the intracranial venous circulation or some pathologic condition, which is obstructing the outflow of blood from the brain Crowe emphasizes that it is very important while making this examination that the patient should breathe freely and normally, that the collar should be loosened so as to expose the neck and upper part of the chest and that the fundi should be examined by the direct method, or with an electric ophthalmoscope while an assistant compresses the internal jugular veins with the tips of the fingers The compression, however should not be maintained longer than absolutely necessary, for it may be possible in this way to rupture a diseased vein or dislodge a portion of a thrombus

During the past two years Crowe has had an opportunity of making this examination in six cases in which there was an acute obstruction, on one side, to the outflow of blood from the cranial chamber In five of these cases the obstruction was due to a thrombosis, secondary to a chronic infection of the middle ear, and the test described above was employed in making the diagnosis In three instances the first symptoms of the thrombosis appeared several days after the radical mastoid operation and offered an excellent opportunity to determine the value of this sign

It is Crowe's custom to make this test before operation on all cases in which a sinus thrombosis is a possible or threatened complication The examination of each of these three cases before operation, indicated that the blood was passing freely into the internal jugular vein on both sides This was also the opinion of the surgeon at the time of the operation, although in each case there was a cholesteatoma which extended backward to the dura of the posterior fossa The wall of the sigmoid sinus and surrounding dura was thickened and covered with granulations Before the operation, however, there had been no elevation of temperature, and the test had indicated that the blood was flowing freely into the internal jugular vein on both sides, therefore, it was deemed advisable to leave the sinus untouched and await developments After a postoperative period of several days, free from discomfort or fever, the patient in each case began to complain of pain in the back of the head, there was a sudden elevation of temperature, a positive Kernig's sign, a low grade of choked disc, and some stiffness of the neck After excluding angina, pneumonia and disturbances of the digestive tract it was necessary in each case to decide whether these symptoms were due to 1 Serous meningitis with retention of pus in the operative wound 2 Localized basilar meningitis 3 Temporal lobe abscess 4 Cerebellar abscess 5 Sinus thrombosis On making the vascular test a second time it was found to be decidedly positive, i e, the stasis in the retinal and supra orbital veins was markedly increased by very slight pressure on the internal jugular vein on the healthy side, whereas at the previous examination the test had been decidedly negative.

The only conclusion from this result was that whatever other complications might be present, it was sure that the blood was no longer flowing freely into the internal jugular vein on the side of the operation The sinus was immediately exposed and opened, and in each case found to be thrombosed In one of the cases, however, even at the second operation the sigmoid sinus was fairly normal in appearance, and on incising it there was a gush of blood The cerebral end of the sinus was packed with gauze and the incision in the sinus wall enlarged downward By pressure on the upper part of the internal jugular vein in the neck pus was forced upward into the wound Further investigation disclosed a thrombus in the bulb which, however, was not purulent

27 **Endocarditis Lenta**—The results of Major's studies lead him to conclude that endocarditis lenta, caused by the *S viridans*, has a sufficiently distinctive picture to deserve recognition as a separate clinical entity That cases of chronic endocarditis may also be due to the *B Influenzae*, *S pyogenes*, or pneumococcus, is, of course, well known, but such cases should be distinguished from those due to *S viridans*, just as epidemic cerebrospinal meningitis, for example, is distinguished from meningitis due to the *B tuberculosis*, *B influenzae* or *S pyogenes* The coccus present in the cases cited by Major corresponds culturally to the organism described by Schottmuller as the *S viridans* No essential cultural differences have been noted between the *S viridans* and *M rheumaticus* Complement fixation tests in one case of endocarditis lenta showed the presence in the patient's blood of specific "antibodies '

28 **Defects in Mucous Membrane of Stomach**—Proceeding on the premises that all that is necessary for the healing of a gastric ulcer is for healthy mucous membrane to grow across its floor and remain intact, and as it seemed possible that the mucous membrane of the ulcer edges might be stimulated by scarlet red and thus accomplish the desired result, the authors fed dogs, in whom an artificial ulcer had been produced surgically, with a 1 per cent scarlet red in olive oil They found that the dyestuff is not toxic and apparently has no deleterious effect on either dogs or rabbits When given by mouth it is a fat selecting vital stain In the course of months the stain is gradually eliminated Subcutaneous and intraperitoneal injections stain only the fat in actual contact with the scarlet red oil solution The authors are unable to say whether the scarlet red has or has not, a definite stimulating action on the epithelium of defects in the gastric mucosa However, the scarlet red oil solution caused a more rapid and better developed growth of epithelium in the group in which it was used, than occurred in the duplicate group in which plain olive oil was used The results with dry powder were not so favorable experimentally, but this may have been due to the fact that the material was not continuously in con

tact with the denuded area They were unable to determine the relative effect of the scarlet red on chronic gastric ulcers, as it was impossible to produce chronic ulcers in dogs with controls of exactly the same size.

Bulletin of Medical and Chirurgical Faculty of Maryland, Baltimore

November V No 5 pp 69 80

30 Cambridge of Yesterday and To-Day N C Carroll Cambridge Mass
31 *Some Results of Treatment of Drinking Water of Baltimore by Means of Calcium Hypochlorite W R Stokes Baltimore

31 **Treatment of Drinking Water with Hypochlorite** —From the evidence at hand, Stokes says, it would seem that the use of the hypochlorite treatment of water has caused a general reduction in the intestinal and water bacteria, and that there has been a coincident decrease of the typhoid morbidity and fatality in Baltimore He advises that the figures should be studied for five year periods at least, however, before coming to any final conclusions concerning this effect of the hypochlorite on the constituents of the drinking water and on the number of cases of typhoid in the city The hypochlorite treatment was begun about the first of June, 1911, and from then on the number of typhoid cases reported monthly during 1911 is much smaller than the corresponding months for 1910, and it also shows a considerable drop as compared to the average cases for 1906 to 1910 inclusive In August, 1910, there were 473 cases, in August 1911, only 280 cases The total number of cases of typhoid for 1910 was 1,891, and although the hypochlorite treatment was not begun until June, 1911, the number of reported cases was only 1,201 for this year The total number of deaths for 1910 was 235 During 1911 the number of deaths from typhoid was only 154, although the hypochlorite treatment as mentioned above was only begun about the first of June.

Canadian Medical Association Journal, Toronto

November II No 11 pp 963 1066

32 Unto the Third and Fourth Generation Study in Eugenics J G Adami Montreal
33 Displaced and Movable Kidney in Women Its Symptomatology Diagnosis and Treatment W Cuthbertson, Chicago
34 *New Reagent (Tolidin) for Detecting Occult Blood R F Ruttan and R H M Hardisty Montreal
35 Factors Frequently Overlooked in Early Diagnosis of Pulmonary Tuberculosis W E Ogden Gravenhurst Ontario
36 Scoliosis. A M Forbes Montreal

34 **New Reagent for Detecting Occult Blood** —The substance used by Ruttan and Hardisty for detecting occult blood is tolidin or orthotolidin, a crystalline basic body of the aromatic series, with melting point 129 130 C, very slightly soluble in water, easily soluble in alcohol and ether and closely allied to toluidin and benzidin It is said to be a reagent of very great delicacy for detecting blood in watery solution and, in addition to this, it is superior to the reagents in general use for clinical work It is greatly superior to all the reagents for detecting blood in urine, and while benzidin, which is easily the best of the well known reagents for clinical work, is quoted here as being equal to tolidin for the detection of blood in feces and stomach contents, this is true only for freshly prepared solutions of benzidin, older solutions losing 50 per cent. of their delicacy in twenty four hours, whereas tolidin will remain unchanged for from three to four weeks, an important fact, adding to the ease with which the test can be carried out Another point in favor of tolidin is that when the blood is in small quantity, the reaction increases gradually in intensity and persists longer than with the other reagents, so being more easily read.

It was found that guaiacum detected blood in dilutions of 1 to 50,000, benzidin, 1 to 700,000, tolidin, of 1 to 7,000 000 phenolphthalein, of 1 to 10 000,000 and even more As an agent for detecting blood in watery solution phenolphthalein was found to be much the most delicate, in fact the test had to be carefully controlled to be sure the positive reaction was due to blood, for it was found that the ordinary distilled water of the laboratory gave a pinkish color, positive reaction, due to some infinitesimal trace of iron or copper salt and so all the distilled water had to be redistilled in glass before being used Guaiacum and benzidin, when positive, give a prompt reaction which, however, depending on the dilution, does not last very long With tolidin, the color, a green to a blue black, depending on dilution does not develop quite so rapidly appearing more gradually and increasing in intensity, the colors lasting a much longer time, even several hours

Colorado Medicine, Denver

November IX No 11 pp 321 360

37 Tumors of Larynx R Levy Denver
38 Treatment of Uterine Displacements C S Elder Denver
39 Historical Notes of Colorado State Medical Society W A. Jayne Denver
40 Salvarsan in Therapy of Syphilis A J Markley Denver
41 Denver Clinical and Pathologic Society F W Kenney Denver

Journal Lancet, Minneapolis, Minn

November 15 XXXII No 22 pp 587 620

42 Diseases and Surgery of Prostate C G Fitel Minneapolis
43 Technic of Operation of Suprapubic Prostatectomy E S Judd, Rochester Minn
44 Some More Important Factors in Intestinal Physiology and Bacteriology E P Quain Bismarck N Dak
45 Use of Salvarsan F R Wright Minneapolis
46 Cerebrospinal Fluid as Diagnostic Agent I M Hammes St Paul
47 New Public Health Public Health Laboratory H W Hill Minneapolis

Journal of Experimental Medicine, Lancaster, Pa.

November XVI No 5 pp 583 718

48 *Chemo-Immunologic Studies on Localized Infections R V Lamar New York
49 *Pigment Formation in Liver During Autolysis and Its Relation to Pigmentation of Hemochromatosis T P Sprunt H S Colwell and H J Hagan Baltimore
50 *Nerve Fibrils in Sino-Auricular Node B S Oppenheimer and A Oppenheimer New York
51 Cultivation of *Spirochaeta Gallinarum* H Noguchi New York
52 Duration and Extent of Induced Resistance Toward Tumor Transplantation in Mice W H Woglom London
53 *Toxic Substances Produced by Pneumococcus R Cole New York
54 *Presence of Protective Substances in Human Serum During Lobar Pneumonia A R Dochez New York
55 *Occurrence and Virulence of Pneumococci in Circulating Blood During Lobar Pneumonia and Susceptibility of Pneumococcus Strains to Univalent Antipneumococcus Serum A. R Douchez New York
56 *Coagulation Time of Blood in Lobar Pneumonia A R Dochez New York
57 *Carbon Dioxid Content of Blood in Pneumonia F W Peabody New York.

48 **Chemo Immunologic Studies on Localized Infections** — It was found by Lamar that virulent pneumococci injected into the cranial or spinal cavities of monkeys produce constantly a meningitis closely resembling pneumococcus meningitis in man, except that the experimental disease pursues a more rapid course to the invariable death of the untreated animal An homologous immune pneumococcus serum injected into the spinal canal exerts a restraining influence on the disease to the extent that when employed early it prevented exceptionally, the occurrence of infection and thus saved the life of the animal, and when given later it at first retarded the disease but subsequently exerted no beneficial action and was powerless to save life A mixture of sodium oleate, immune serum and boric acid exerted regularly a more powerful action than immune serum alone, and not only prevented the occurrence of infection but also, when administered repeatedly, arrested the progress of an actually established infection and led, often, to the enduring and perfect recovery of the inoculated animal It is proposed to employ a similar mixture in the direct treatment of pneumococcic meningitis and possibly of still other accessible local pneumococcic infections in man

49 **Pigment Formation in Liver During Autolysis** —Without claiming any close analogy between the autolytic changes and pigmentation in pathologic processes, the authors believe it has been shown that iron-containing, as well as other kinds of pigments, may be formed during the autolytic degeneration of parenchymatous cells independently of the hemoglobin in the blood stream and hence may be derived from the protein constituents of the cell itself

50 **Nerve Fibrils in Sino Auricular Node** —Aside from the nerve fibers which enter the pace making node from the subepicardium, the authors observed within the limits of the node a few ganglionic cells and a plexus of moniliform nerve

fibrils in very close relation to its muscle fibers, hence, they claim that the sino auricular node, like the auriculo ventricular, may be considered from a histologic standpoint a neuro muscular organ

53 **Toxic Substances Produced by Pneumococcus**—Cole is convinced that the filtered blood serum of rabbits infected with pneumococci is not toxic Extracts of pneumococci prepared by keeping emulsions of the bacteria in salt solution at 37 C for varying periods of time may be toxic, and when injected intravenously into guinea pigs, may produce a train of symptoms followed by acute death resembling that seen in acute anaphylaxis Such extracts, however, are not uniformly toxic and it has been impossible to discover the exact conditions under which such extracts become toxic. When the centrifugalized peritoneal washings of guinea pigs infected with pneumococci are injected into the circulation of normal guinea pigs, these animals very frequently exhibit symptoms like those seen in acute anaphylaxis, and a considerable proportion of the animals die acutely When pneumococci are dissolved in dilute solutions of bile salts and the solution resulting is injected intravenously into rabbits and guinea pigs, these animals show with great constancy the same symptoms that are seen in acute anaphylaxis The solution of pneumococci in bile may occur in ten minutes at 37 C or in half an hour on ice This is considered evidence that the toxicity of the solution does not result from digestion of the bacterial protein, but is due to substances preformed in the bacterial cells and set free on their solution The toxicity of the solution is diminished or destroyed by heating to 55 C or over

54 **Protective Substances in Human Serum.**—Dochez's experiments demonstrate that protective substances are usually present in the blood of patients recovering from lobar pneumonia As a rule, the appearance of protective bodies in the blood, when demonstrable, coincides rather sharply with the period of critical fall in temperature and the disappearance of symptoms These substances are not present in the blood in any measurable degree before the crisis, but afterward they may reach a considerable concentration In certain instances, protective substances either become evident some time after the occurrence of the crisis, or cannot be demonstrated at any period of the disease Experiments in which it is possible to test serum against an homologous strain of pneumococcus yield, in the majority of cases, evidence of the presence of protective bodies, whereas in those in which stock cultures are used, the serum, as a rule shows no protection The development of specific protective substances in the serum of patients with lobar pneumonia suggests that these bodies may play a part in the mechanism of recovery

55 **Pneumococci in Circulating Blood.**—Studies of the bacteriology of the blood were made by Dochez in thirty seven cases of lobar pneumonia The pneumococcus was isolated from the blood in approximately 50 per cent of the cases studied The course of infection in individuals with pneumococcus in the blood was more severe than in those in which no organism could be cultivated from the blood Seventy seven per cent of the patients with positive blood cultures died, and 79 per cent of patients with negative blood cultures recovered In fatal instances of pneumonia, in which the pneumococcus was found in the blood, the number of organisms per cubic centimeter of blood was very high in the last stage of the disease In individuals dying of pneumonia without blood infection, the disease was characterized by a rapid spread of the local process in the lungs It is not unlikely that the symptoms of collapse developing on the fifth or sixth day of lobar pneumonia, are often the expression of serious invasion of the blood by the pneumococcus In other instances, they mark an extension of the local process in the lungs Strains of pneumococcus isolated from the blood of patients with lobar pneumonia were usually of high animal virulence In a few instances in which the organism isolated from the blood was of low virulence for animals, the patients recovered The protective power of a univalent antipneumococcus serum was tested against nineteen strains of typical pneumococcus and against four strains of closely allied organisms The serum manifested some degree of protection against twelve out of nineteen strains of typical pneumococci No protection was observed against the atypical organisms In eight instances the degree of protection obtained was high, in three low, and in one there occurred only a prolongation of the period of life of the inoculated animal

56 **Coagulation Time of Blood in Lobar Pneumonia**—The coagulation time of the blood was found by Dochez to be generally prolonged during the acute stage of lobar pneumonia, returning to normal during the period of convalescence There seems to be a simultaneous increase in the quantity of circulating fibrinogen The lengthening of the coagulation time is probably due to an increased formation of antithrombin The source of the increased antithrombin and fibrinogen is probably the liver, and the stimulus to increased production of these two substances is due to the nature of the infecting organism

57 **Carbon Dioxid Content of Blood in Pneumonia**—A diminution in the carbon dioxid content of the blood is held by Peabody to be a constant feature in pneumonia Occasional cases, however, may fail to show low carbon dioxid The carbon dioxid in the blood bears little definite relation to the severity of the disease, except that it tends to be lowest in severe cases and in the terminal stages of the disease There is less deviation from the normal in short or mild cases The diminution in the carbon dioxid in the blood bears no immediate relation to temperature, as it may persist for some days after the patient is afebrile The diminution in carbon dioxid corresponds to the other evidences of metabolic changes in infection and, like them, may be even greater after than during the febrile period The changes in the carbon dioxid content of the blood run parallel to the output of ammonia in the urine The carbon dioxid appears to bear no relation to chlorin excretion In two unusual cases the carbon dioxid content of the blood was normal or above normal This was associated with a very low oxygen content of the venous blood

Journal of Medical Association of Georgia, Augusta

November II No 7 pp 209 240

58 Prevention of Diseases W D Travis Covington
59 After-Care of Simple Mastoid Wounds. A B Mason Atlanta
60 Woman and Her Physician R. H Jenkins Hogansville
61 Roentgen Therapy of Skin Lesions C Swanson Atlanta
62 Eclampsia M M Johnson Waycross
63 Three Cases of Intestinal Obstruction with Operation. T J Carswell Waycross
64 Treatment of Pellagra with Report of Twelve Cases J E Knight Waycross
65 Relations of Eye to Diseases of Other Parts of Body B H Minchew Waycross
66 The Fly A Fleming Waycross

Journal of Nervous and Mental Disease, Lancaster, Pa.

November XXXIX No 11 pp 721 792

67 *Myasthenia Gravis. M A Starr New York
68 Relations of Fifth Nerve M A Bliss St Lou
69 Terminal States in Pellagra Resembling ood of General Paralysis
with Report of Five Cases. E D Bor durant Mobile Ala
70 Race Hygiene Study and Its Import Stomance to Modern Culture
H Lundborg Upsala Sweden
71 Acute Infectious Transverse M
elitis Complete Recover necessary elitis Due to Virus of Poliomy
72 State Psychopathic Hos thy mucou B Sachs New York.
W Channing Boston.

67 **Myasthenia Gra**ain intact, ntal in Boston
lected from the limbrane of th vis.—Two hundred and fifty cases col
patients, 142 wed and thi erature are analyzed by Starr Of the 250
patient on rec dogs in ere females, 108 were males The youngest
greatest fregically, with is a child 2 years 9 months old The age of
the oldesd that the dword is between 20 and 30, but no age is exempt,
double erious effect quency patient recorded having been 72 years old Ptosis or
per cent it is a fe has been recorded as the first symptom in 40
and his the stain vision has been recorded in the action of the lips
ur aperitoneal int of the cases Some difficulty of movement and unnat
G the scarlet of the face leading to a difficulty appearance described by
or whether t al facial expression and a peculiar weakness of the
the g action owers as the "nasal smile or snarl," due to a symptoms in 4 per cent of
sv osa How ocularis oris have been the first been recorded as the first
the l and bette cases Difficulty in speech has patients, and a paralysis of
for which it was symptom in 10 5 per cent of the symptom in eight patients
as ch plain of vocal cords has been the first has been recorded
for e not so fa Difficulty in swallowing cases It is there
to the fact ming 3 per cent of the cranial nerves has been
the first symptom in 8 5 per cent of the
evident that some affection

the first symptom in 69 per cent of the patients recorded, and hence the constant tendency to confound this disease with true bulbar palsy

In 31 per cent of the patients the records show that the first weakness was felt in the arms or in the legs, most commonly in the legs, and that for several days, weeks, or even months before any cranial nerve symptoms developed, a very decided weakness of the limbs, leading to an almost complete paralysis, had occurred In very many cases this weakness, being of a functional nature not attended by atrophy or fibrillary twitchings or reaction of degeneration, and not attended by any uniform disturbances in the reflexes either of the nature of the loss of reflex or in the exaggeration of reflex has led to the diagnosis of general neurasthenic weakness or of hysteria Starr calls particular attention to the form of myasthenia in which weakness of the limbs without any cranial nerve involvement constitutes the predominant symptom, because he believes that many cases of this character have escaped recognition, and this is the mode of onset in one third of the cases

A symptom to which very little attention has been given, but which has been recorded in an astonishingly large number of cases, both as an early sign and as a constant symptom, is headache This is generalized and is increased by mental effort or by physical exertion While an enlargement of the thymus gland has been observed in about 28 per cent of the patients examined, its absence in 72 per cent of the patients seems to afford positive evidence that it is not essential to the development of the disease In almost all recent autopsies the infiltration of the muscles and all of the internal organs of the body by small cells clustered about the lymphatic system and infiltrating the tissues widely, which have been termed lymphorrhages, has been observed The pathology of the disease is still obscure Many forms of treatment have been employed in myasthenia The use of the organic extracts, especially of thyroid, of pituitary and of parathyroid, seems to have been universal in the past ten years But so far as the results are recorded this treatment has not been successful Strychnin has been employed by almost every observer and the reports of the effects are conflicting Calcium lactate has been employed in a few cases with apparent benefit All authorities agree that rest in bed without use of the eyes and without talking is essential to any improvement

Lancet Clinic, Cincinnati

November 9 CVIII No 19, pp 501 526

73 Sanitation Surgery and Hygiene in French Army K L Stoll Cincinnati.
74 United Effort and Necessity for It C T Cutting Seattle Wash
75 German Democracy and American Aristocracy in Medicine M L Heidingsfeld Cincinnati
76 Comparative Study of Appendices and Ceca of Vertebrates with Addition of Small Birds Appendices to Literature D D De Neen Cincinnati

November 16, No 20, pp 527 552

77 Buried Animal Suture H O Marcy Boston
78 Retro-Cecal Hernia Report of Case J L Ransohoff Cincinnati
79 Blood Stains and Blood Examinations A E Osmond Cincinnati

Military Surgeon, Washington, D C

November XVI, No 5 pp 491 624

80 *Sanitary Awakening of a Nation C P Wertenbaker U S Public Health Service
81 Expansive Bullets Their Use in Modern Warfare Should Be Condemned E R Garcia Mexican Army
82 Hints of Health and Individual Sanitation on Active Service S H Chang Peking China
83 *Influence of Certain Camp Epidemics on Geographic Expansion Political History and Military Policy of United States E L Munson U S Army
84 *Master Key in Sanitation W C Rucker U S Public Health Service
85 Tour of Duty with a Battalion of Marines on Isthmus of Panama J G Ziegler U S Navy
86 *Use of Tincture of Iodin in Treatment of Blistered and Abraded Feet. G H Richardson Washington D C

80, 83 and 84 Abstracted in The Journal, October 26, pp 1563 and 1564

86 **Tincture of Iodin for Blistered and Abraded Feet.**—In order to ascertain whether tincture of iodin would be beneficial in the treatment of "sore feet," preventing simple abrasions of the skin from becoming ulcerated and hastening the cure where considerable inflammation existed, Richardson gave the abraded surface a preliminary scrubbing with soap and warm water, but later, in order to see results under conditions simulating those of actual service, he simply applied thoroughly over the affected areas, with a camel's hair brush or cotton swab, the official 7 per cent tincture of iodin and allowed it to dry In cases in which the blisters had not ruptured, they were first painted and then incised by a sharp pointed sterilized bistoury, care being taken to enter the blister under and beyond its raised surface After expressing the serum, the incision was given a second coating In cases of simple abrasions of the superficial layers of the skin, no dressings, ointments or powders were applied and the stockings were replaced, the men being told to report the following day Those who reported were invariably well and needed no further treatment

Where blisters had broken or ulcers had formed, some sort of protective dressing was found necessary and for this purpose nothing seemed to surpass zinc oxid adhesive plaster, properly cut and fitted to the part The method employed consisted of placing two or three small squares or layers of plaster together, folding on the non adhesive surface, and cutting with scissors a circular opening slightly larger than the inflamed area it was desired to protect Care should be taken that the pad is not too large or too thick and that it is applied without wrinkles Where there was considerable exudate, Richardson applied a few layers of gauze over the ulcer, being particular that they were not wide enough to prevent the plaster from adhering to the healthy skin In this way all pressure from the shoe was overcome, thus preventing any direct, constant irritation which could interfere with the healing process For inflamed callosities or bunions, adhesive plaster applied in the manner described gives immediate relief and renders a man capable of walking with comparative comfort

Mississippi Medical Monthly, Vicksburg

November XVII No 7 pp 131 150

87 Case of Penetrating Gunshot Wound of Chest. M J Alexander Tunica
88 Periostitis Albuminosa C D Davis McCondy
89 Twenty Five Administrations of Salvarsan and Neosalvarsan T B Lewis Greenville
90 *Case of Diabetes in Child Eight Years of Age. J W Thompson Independence
91 Pneumonia S T Wells Alligator
92 Whooping Cough H C Buck Friars Point.

90 **Diabetes in Child**—Thompson's patient received an injury about six weeks before he died He fell on the ice and frozen ground and received a cut about half an inch long in the skin of the forehead After a few days, three or four the wound showed signs of infection, some suppuration, and there was an inflammatory zone around the wound but there was no fever Thompson lifted the scab, evacuated what little pus was there and applied a little iodin The wound was soon well and he heard no more from the child for nearly six weeks One night about 10 o'clock he was called to see him and found his breathing rapid and shallow, about seventy to the minute, pulse 130, and temperature subnormal Since receiving the injury he had, as they said 'been going down hill" had lost fifteen pounds or more in six weeks, had a voracious appetite and intense thirst, and, from what the family said, must have voided at least a gallon of urine in the twenty four hours Thompson gave one one hundred and twentieth strychnin and one three hundredth atropin every four hours, but was called the next morning at 5 o clock and found him comatose He made an examination of the urine and found specific gravity 1 035 and sugar present, no quantitative analysis was made Stimulation and elimination were continued, but the child died in about twenty four hours in what Thompson thought to be diabetic coma

Ohio State Medical J rnal, Columbus

November 1 pp

93 Diagnosis and T
C F Briggs C
94 Boards of Health
95 Surgery of K
Baldwin Col

96 *Vaccine Therapy of Tuberculous Adenitis. W Gardner Toledo
97 Some Phases of Nervous Ill Health and Their Psychologic Control H. H Drysdale Cleveland
98 *Chronic Infectious Endocarditis O Berghausen Cincinnati
99 Layman s Debt to Medical Profession W F Dickins Lewis Findlay

96 Abstracted in THE JOURNAL, June 1, p 1534

98 Abstracted in THE JOURNAL, May 25, p 1630

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Australasian Medical Gazette, Sydney

September 28 XXXII, No 13, pp 321 348

1 *Hydatid Cysts of Lung F G Griffith
2 Radiographic Notes on Hydatid Disease of Lungs H Harris.
3 Biochemistry of Symbiotic Growth of Aerogene and Anaerogene Coliform Organism B Bradley

October 5, XXXII, No 14 pp 349 372

4 Value of Laboratory Worker to Profession J S C Elkington
5 Case of Lumbar Hernia E M Sweet
6 Fecal Fistulae of Small Intestine Needing Operation G H Abbott
7 Cystic Kidneys in Infant. W A Fraser

October 12 XXXII, No 15, pp 373 396

8 Mental Defectives. F Sinclair
9 Idem A Davidson
10 Need for Educating Public Opinion on Problem of Feeble-Minded M Booth
11 Mentally Defective Prisoner A Palmer
12 Backward and Feeble Minded Children R Roth.

October 19 XXXII No 16 pp 397 426

13 Public Health Problems J W Hope
14 Is Any Illness in Infants Due to Teething? F S Hone
15 Fracture Dislocation of Ensiform. C MacLaurin

1 **Hydatid Cysts of Lung**—Of all cases of hydatids, Griffith says, about 10 to 15 per cent occur in the lung In the lung the cyst wall is thin and poorly supported by the surrounding tissue This thin adventitious cyst has special relations to arteries, veins and bronchi, the last often opening directly into it The lung is vulnerable, and a further peculiarity results from changes liable to occur in it, i e, pericystic pulmonary congestion, which may sometimes give rise to hemoptysis, and even pneumonia and to pericystic sclerosis The hydatid cachexia (weakness wasting, anorexia, etc), is considered by some authors to appear earlier in lung than in liver cases Degenerative changes sometimes occur, death of the parasite with inspissation of the contents which become colloid, caseous or even calcareous, the cyst shriveling up

In its early stage pulmonary hydatid is compatible with perfect health Any of the following phenomena may occur Cough—At first usually dry and jerky, later it may be very distressing Ill-defined uneasiness or actual pain Hemoptysis—(a) In an early stage, even when the cyst is less than a pea in size, hemoptysis may result from congestion of the surrounding lung, (b) with rupture of the cyst occurring either naturally or as a result of an operation, violent, even fatal, bleeding may occur, (c) occasionally repeated hemorrhage may persist for months, or years, after rupture Pleurisy in the serosa over the cyst with or without effusion If the cyst grows outward toward the wall of the chest, it may simulate pleural effusion or may cause erosion of bone and arching of the thorax, and rarely may point and burst externally Dyspnea—If the cyst be very large or near the hilus If the parasite dies the cyst shrinks and its contents become colloid or calcareous Pneumonic Attacks—Diffuse or massive pneumonia, sometimes resembling frank lobar pneumonia Rupture—Rupture of the cyst may occur, (a) into the adventitious cyst, (b) into a bronchus, generally the result of (a) this may result in spontaneous cure, (c) into the pleura, often with fatal result, or (d) into both bronchus and pleura leading to pneumothorax or pyopneumothorax As a rare complication rupture into other organs may occur Urticaria—Probably due to absorption of fluid Changes in the blood—(a) Eosinophilia, (b) antibodies in the serum Secondary infection with hectic fever (usually the result of fissured rupture) Tuberculosis may occur as a secondary infection either in the neighborhood of the cyst or at a distance Hydatid cachexia is said to develop earlier, and to be more marked in the case of the lung than of other organs, often, however, the patient appears in robust health

In many cases, even when the cyst has attained quite a large size, there may be practically no signs This is especially the case when the cyst is deep-seated At other times the following may be observed Dulness—Sometimes typically circular in outline over the circular area in which the spherical cyst meets the chest wall Hydatid thrill or fremitus—Over the dull region vocal fremitus and breath sounds may be feeble or absent, and, in some cases, there may be exquisite pectoriloquy Nearby pleuritic friction may be heard or fine crackles in the compressed lung If the cyst be large the heart and other organs may be displaced. If the unruptured cyst be very large the intercostal spaces may be obliterated, and the chest wall may bulge, more rarely we may find such signs as dysphagia difference in the pulses, etc Other special signs may be associated with complications, e g, fetid expectoration, pleural effusion, urticaria After rupture, we get the signs of a cavity, and if sepsis occur, râles and rhonchi In far advanced cases as in other forms of lung disease, clubbing of the fingers is seen In making the diagnosis we have the following aids (1) Diagnostic tuberculin test, (2) Roentgen ray examination, (3) blood examination.

British Medical Journal, London

November 9 II No 2706 pp 1261 1348

16 *Some Problems in Infection and Its Control S Flexner
17 Bright s Disease J L Smith
18 Some Fallacies in Routine Testing of Urine H Maclean
19 Excretory Function of Intestine and Its Relation to Disease O T Williams.
20 Investigation of Puncture Fluids as Aid to Diagnosis and Treatment. T J Horder
21 Association of Chronic Duodenal Ulcer with Morbid Conditions of Ileum Appendix and Colon D P D Wilkie
22 Etiology of Dissecting Aneurysm T Shennan and J H H Pirie
23 Gastric Juice in Pathology of Gastric Ulcer C Bolton.
24 Vaccine Therapy Preparation and Standardization of Vaccine J Eyre, L C P Ritchie D W Carmalt-Jones and W J Wilson
25 Idem Laboratory Tests as Guide to Inoculation Treatment J Freeman
26 Direct Cultivation of Tubercle Bacilli from Tuberculous Tissues J Cruickshank
27 Pyrogenetic Properties of Bacillus Typhosus E C Hort and W J Penfold
28 Pyemic Actinomycosis with an Actinomycotic Endocarditis. G Dean
29 Variations in Morphologic Characters of Bacteria and Their Reaction with Sugars Under Different Conditions J M Beattie and A G Yates
30 Observations on Brownian Movement, with Special Reference to Anthrax Spore E. Emrys Roberts and S B Walsh
31 Bacteriology of Infective Disease in Rangoon. A. Whitmore

16 Also in *The Lancet*, November 9

Lancet, London

November 9, II No 4654 pp 1271 1342

32 *Some Problems in Infection and Its Control S Flexner
33 Diagnosis and Treatment of Incipient Pulmonary Tuberculosis D B Lees
34 Treatment of Unilateral Cataract. J H Parsons
35 Case of Hemi Hypertrophy of Body with Nevus and Varicose Veins E D Telford
36 *Case of Meningitis E A. Ross
37 Case of Pneumococcal Cerebrospinal Meningitis J H Cumming
38 Pancreatitis with Jaundice in Infectious Diseases W I Goldie
39 Fracture of Carpal Scaphoid Bone Associated with Median Nerve Involvement W A. Campbell

32 **Problems in Infection**—The address by Flexner is devoted almost entirely to a discussion of present day knowledge of anterior poliomyelitis

36 **Meningitis**—In Ross' case the only organism that could be cultivated from the cerebrospinal fluid during life was a bacillus of the proteus group

Quarterly Journal of Medicine, London

January V No 18, pp 167 307

40 *Adrenal Cortex Its Rests and Tumors Its Relation to Other Ductless Glands and Specially to Sex E E Glynn
41 *Antigen (Vaccine) Treatment of Enteric Fever F J Sadler
42 *Myotonia (Thomsen s Disease) T W Griffith

43 Distribution and Excretion of Radium and Emanation After Internal Administration E B Smith
44 *Two Cases of Paroxysmal Bradycardia (Total) E F Laslett.
45 Cardiorespiratory Murmurs C Coombs.
46 Primary Occlusion of Ostia of Hepatic Veins. T Thompson and H M Turnbull
47 *Digitalis Preparations Employed in Medicine W E Dixon

40 **Adrenal Cortex, Its Rests and Tumors**—Glynn summarizes his paper as follows The adrenal cortex and medulla have a different development and different functions, the former is especially connected with growth and sex characters, the latter with blood pressure Tumors are rare, primary malignant tumors especially so, the most usual being (a) round celled sarcoma, (b) adrenal hypernephroma, an epithelial like growth of cortical origin Sarcomata are the commoner, they are more frequent in children, especially in male children Adrenal hypernephromata are five times more frequent in female children, though in adults they are slightly commoner in males Sarcomata and adrenal hypernephromata differ histologically, and in children at any rate, differ clinically Adrenal hypernephromata are associated with sex abnormalities, almost invariably in children, usually in adult females before the menopause, but apparently never in adult females after the menopause, or in adult males Adrenal rests or bilateral hyperplasia of the adrenal gland is found in at least 15 per cent of female, but only 0 70 per cent of male pseudohermaphrodites Hyperplasia and hypernephromata of the adrenal cortex in females are usually associated with a diminution of certain female and the development of certain male sex characters The converse rarely occurs The only conditions in which some female sex characters are constantly acquired in males, or male sex characters fail to develop, are after castration performed before puberty, and occasionally in acromegaly Premature development of female sex characters in females may occur with certain ovarian tumors, and of male sex characters in males with certain tumors of the pineal gland, adrenal cortex and testicle In children and young adult females where the sex abnormalities are acquired there is usually unilateral malignant cortic l neoplasia

The neoplasia probably directly or indirectly causes the abnormalities In pseudohermaphroditism the sex abnormalities are mainly congenital and the adrenal lesions, if any, are bilateral cortical hyperplasia or cortical rests The hyperplasia possibly directly or indirectly causes the abnormalities, or some of them Rests from the adrenal cortex are common in certain localities, especially in infancy, except in the kidney They are usually of minute size, and are not associated with sex abnormalities unless there is much enlargement, when such may sometimes occur in pseudohermaphrodites The enlargement of the adrenal cortex during breeding, pregnancy and after castration and the small size in deficient sexual development are additional evidences of the connection of the cortex with sex characters. The functional association of the adrenal with the pituitary and other ductless glands, and the appearance of certain sex abnormalities in acromegaly, indicate that a true solution of the connection between the adrenal cortex and sex will only be found when the interrelationships of the various ductless glands are better understood Certain facts are opposed to the hypothesis that renal hypernephromata arise from the remnants of adrenal cortex, viz.—(a) The great dissimilarity in microscopic structure between hypernephromata of the renal and adrenal glands (b) Renal hypernephromata apparently never influence growth or sex characters (c) The difficulty of explaining why adrenal rests, though comparatively rare in the kidney, should produce such a common tumor as the hypernephroma, by far the commonest renal tumor, while adrenal rests in other localities, though comparatively common, especially in early life, should, like the adrenal gland itself, so rarely produce tumors either benign or malignant These considerations support the statements of Stoerk, Zehbe and Wilson and Willis, who maintain that renal hypernephromata rarely if ever arise from adrenal rests Adrenal rests in the ovary are exceedingly uncommon The ovarian hypernephroma does not produce the characteristic sex abnormalities, it probably arises from the lutein cells of the ovary itself

41 **Antigen Treatment of Enteric Fever**—Sadler takes exception to the name of vaccine treatment in typhoid He prefers the term "antigen treatment" for the object of the treatment is to produce such antibodies in the patient's system as will help him to deal with the infection from which he is suffering, a use to which vaccine proper is never put If the case appears to be a severe one, and especially if it be of the cerebral type with muttering delirium, he gives half the ordinary initial dose, that is to say, 1,000,000 bacilli to an adult and proportionately less to children If on the other hand, the patient seems not unduly ill, and especially if he is admitted within the first fourteen days, he gives 2,000,000 bacilli on admission to an adult, and proportionately less to children In the less severe cases the initial dose of 2,000 000 is the largest which is given throughout the disease, and the second and subsequent injections are of 1,000,000 bacilli only Sadler thinks one of his cases, in which there was a relapse, makes it advisable, even if the temperature has fallen to normal within five days after the first injection, or has assumed a convalescent type, to give at least one reinjection with a view to preventing relapse So none of his patients now get less than two injections unless the case is of such a serious nature as to terminate fatally before the fifth day after admission One of the difficulties of the treatment in the cases beneficially affected by vaccine is that the patient begins to be hungry before his tongue justifies any material increase in his diet, and in hemorrhage cases long before the bowel is likely to be strong enough to bear the diet which the patient desires Of this Sadler feels sure, that he would now not be justified in withholding the vaccine treatment from any case of typhoid he came across, for it is impossible to foretell how severe an individual case is going to be, and even with the severe cases by administering smaller initial doses of vaccine, there is reasonable prospect of safety, and the patient is none the worse for having received the vaccine

42 **Myotonia.**—Griffith reports a case which presented symptoms of myotonia in a pronounced form, along with marked atrophy of some groups of muscles and an enlargement of those of the calves In this case there was much from the clinical side to make him suspect that the symptoms of myotonia were associated with those of pseudohypertrophic palsy, but the increase in the knee jerks, the age of onset, the distribution of the atrophy and especially the absence of wasting of the lower part of the pectoralis major made him hesitate to conclude that this was the case The histologic examination appears definitely to exclude this affection and to show that there was a real enlargement of the muscular fibers, and that any increase in the general mass of the muscle was not due to a fatty or fibrous infiltration. Following Rossolimo and modifying his title to the special conditions met with in his patients, Griffith calls the case one of myotonia atrophica et hypertrophica

44 **Paroxysmal Bradycardia**—The first case described by Laslett exhibited sinus arhythmia of a grade which is unusual at any age and very rare beyond middle life During the long auricular pauses multiple ventricular extra systoles occurred The patient suffered from attacks of giddiness which it is suggested were due to cerebral anemia induced by the long intermissions of the pulse The longest intermission so far observed was two and a half seconds in duration The arhythmia temporarily disappeared after the administration of atropin, and was therefore in all probability vagal in origin In the second case a true bradycardia of almost regular rhythm was found shortly after one of the cerebral attacks from which the patient suffered It is suggested, though not proved, that the infrequent rate of the heart was due to increased inhibition

47 **Digitalis Preparations Employed in Medicine**—Pharmacologic and clinical investigations, Dixon says, have not made a clear case for the substitution of "active principles" for Galenical preparations of digitalis in the treatment of patients These active principles are for the most part just as irri
as the infusion or tincture, they are nei relia
constant in action than a properly s actu

are they absorbed more rapidly, they have the same tendency to accumulate and are much more expensive. The one advantage that certain of them may possess over the pharmacopeial preparations is that they may be given intravenously without ill effects.

Journal of Tropical Medicine and Hygiene, London

November 1, XV, No. 21, pp. 321-336

48 Porocephaliasis in Man. L. W. Sambon.
49 Some Experimental Facts re Kala Azar (Indian). R. Row.

Archives Générales de Médecine, Paris

October, XCI, No. 10, pp. 869-960

50 *The Tuberculin Reactions. J. Castaigne and Gouraud.
51 *Compulsory Declaration of Tuberculosis: Its Objects and Limitations. G. Kuss.
52 *Arrest of Acute Tuberculosis by Artificial Pneumothorax. L. Rénon.

50. **Tuberculin Reactions.**—This article explains the principles on which the various *reactions to tuberculin are based* and the different technics and indications in different cases for the subcutaneous, ocular, nasal, cutaneous or intradermal methods.

51. **Compulsory Declaration of Tuberculosis.**—Kuss' address was presented at the Tuberculosis Congress at Rome last April. He insists on the necessity for compulsory declaration of every death from tuberculosis and disinfection of the premises. The head of the family and the patient should be *informed* when tuberculosis is diagnosed but compulsory declaration is of little use. Special advantages should result for the patient when the head of the family informs the proper authorities, but this *should not be made compulsory*. The patient and family should be instructed in means to prevent infection of others, and health officials should be provided who will disinfect the premises in a discreet manner without complicated apparatus, especially when a tuberculous person changes his residence. Kuss thinks it would be an excellent plan if once a year physicians filled out a general question blank stating the number of cases of pulmonary and laryngeal tuberculosis they have encountered, not naming their patients, these data to be preserved in the bureau of vital statistics and bureau of sanitary house inspection.

52. **Artificial Pneumothorax in Galloping Tuberculosis.**—*Rénon* says that he has seen over 120 articles on therapeutic artificial pneumothorax in the current literature of the last five months, and he quotes arguments that have been presented against this method of *creating a new morbid condition in* order to cure another—the danger of whipping up a process in the other lung or bringing on heart trouble, the tediousness of the treatment and its expense—but against all these arguments there is the record of great benefit realized. This is particularly striking, he declares, in the cases of acute tuberculosis *which have proved rebellious* to all other measures. In cases of galloping pulmonary tuberculosis in which the process continued a progressive course in spite of all treatment and a fatal outcome in four or five weeks seemed certain, he has witnessed the immediate arrest of the progressive course under the artificial pneumothorax. Even if there are a few pleural adhesions *preventing the total collapse of the lung* the partial collapse answers the purpose, and it may become total as the adhesions stretch or break. It may thus permit the gaining of precious time which will *allow other* measures a chance to display their efficiency. It is possible, Rénon adds, that these acute forms with rapid softening of lung tissue and tendency to severe hemoptysis may prove to be the special indication for the therapeutic pneumothorax, while we are waiting for the specific remedy that will cure tuberculosis.

Bulletin de l'Académie de Médecine, Paris

October 22, LXXVI, No. 34, pp. 277-324

5 *Blood Borne Origin of Appendicitis. (Origine hématogène de certaines appendicites aigues.) F. Widal and *others*.
54 *Epilepsy. (Genèse et traitement de l'épilepsie commune.) M. de Fleury.

October 29, No. 35, pp. 325-354

55 *Transfusion of Blood After Excessive Uterine Hemorrhage. (Transfusion directe du sang après hémorragie par décollement du placenta normalement inséré.) Oui.

53. **Blood Borne Infection as Cause of Appendicitis.**—Widal reports a case in which the blood borne origin was unmistakable as paratyphoid B bacilli had been *found in the blood* two weeks before the onset of the appendicitis. There had been two weeks of apparently typical typhoid fever before the appendicitis developed. It *proved fatal in two days and necropsy* disclosed extensive lesions in the cecum and appendix with pure cultures of the above bacilli while the rest of the intestines were apparently sound. (See Paris Letter, p. 1986.)

54. **Treatment of Epilepsy.**—De Fleury ascribes epilepsy to a meningo-encephalitis which may have developed before birth. The *seizures are brought on by auto intoxication,* generally of intestinal origin. We are powerless against the organic irritability of the motor zone, except with bromids and other sedative measures, but we have a number of weapons at our disposal to combat the digestive intoxication and thus effectually eliminate one extremely important factor in the manifestations of epilepsy. He reports excellent results from treatment on these principles in thirty seven cases. The main reliance is on a diet to avoid generation of intestinal poisons, thus discarding all foods of animal origin, including milk, eggs, fish and meat. Milk and eggs are peculiarly liable, he says, to generate the poisons and thus bring on the seizures, so he prohibits them entirely until the patient has outgrown the seizure habit. The diet should consist of vegetables, salads, fruits, raw and cooked, starches, honey and preserves, with sweet and diuretic drinks to a total of a liter a day. More fluid than this might have an injurious influence by raising the blood pressure. The vegetable diet is supplemented by lactic ferments to transform the intestinal flora. None of his patients seemed to lose weight or suffer on this diet. He thinks it might prove effectual also in warding off eclampsia, his experiments with a fox terrier inclined to "fits" gave very encouraging results.

55. **Transfusion of Blood for Puerperal Hemorrhage.**—The healthy young woman in question was in labor with her sixth child when the normally implanted placenta separated prematurely and excessive hemorrhage followed. The pulse was 140 and the patient too exsanguinated to rally. The right radial artery of the husband was then sutured to the woman's right median cephalic vein, according to Carrel's technic except that two stitches instead of three were taken. The anastomosis was done under local anesthesia for the husband and no anesthesia for the woman. After five or six minutes her lips turned pink, her eyes opened and the pulse became perceptible once more. The donor's radial artery was rather small and seemed to contract occasionally, and the transfusion was kept up for an hour. The parts of the vein and artery utilized for the anastomosis were resected and found apparently *normal*. The woman's convalescence proceeded undisturbed thereafter. *An* important point in the technic of the anastomosis is to strip both artery and vein of adventitia.

Journal de Médecine de Bordeaux

October 13, XLII, No. 41, pp. 645-660

56 *Diphtheric Pseudotabetic Paralysis in Adult: Recovery Under Antitoxin. B. Auché and Dantin.

October 20, No. 42, pp. 661-676

57 Chronic Addison's Disease: Three Cases. (3 cas de syndrome d'insuffisance capsulaire chronique.) C. Mongour.

56. **Antitoxin Treatment of Diphtheria Paralysis in Adult.**—The patient was a man of 34 who developed diphtheria after the death of a child from the disease. He was given three injections of antitoxin and seemed to have quite recovered by the end of a week. But a few days later paralysis of the velum, eyes and limbs became evident, closely resembling the motor disturbances of tabes. He was given 140 c.c. of antitoxin in the course of a month by subcutaneous injections and seemed entirely cured by the end of the second month. To avoid danger of anaphylaxis, the first injection of 20 c.c. of the antitoxin after the paralysis had developed was preceded by injection of 1 c.c. The intervals at *first were from three to* five days. The paralytic phenomena continued to progress the first week, but then were arrested and soon began to retrogress. Several *other cases in Auché's experience* have confirmed the benefit from systematic antitoxin treatment in diphtheric

paralysis He adds that a prophylactic injection when the first case developed in the family might have warded off the father's entire sickness

Lyon Chirurgical, Lyons

November VIII, No 5 pp 461 552

58 **Lesions of the Vagus Nerve in the Neck* (*Les lésions traumatiques et opératoires du pneumogastrique au cou*) L Bérard and A Chalier
59 *Amputation of the Leg (Procédé d amputation ostéoplastique de cuisse) L Imbert (Amputations ostéoplastiques diaphysaires et greffes osseuses) G Cotte
60 *Tuberculosis of the Nasal Accessory Sinuses (Tuberculose des sinus de la face) M Collet

58 ***Injury of the Vagus Nerve*** —Bérard and Chalier had their attention called to this subject by eight experiences in their own service, in two the tenth nerve had to be resected and in six the nerve was injured more or less during an operation in the region They have found on record seventeen cases of traumatic injury of the vagus in the neck and fifty of operative resection The details of this material are tabulated for comparison They have also found a number of cases in which the vagus nerve was irritated The outcome of the traumatic or operative lesions of the cervical vagus was surprisingly favorable in nearly every instance, except the gunshot wounds only six of the seventeen patients in this group survived, one being left with paralysis of the left vocal cord Section or resection of the cervical vagus does not seem to cause any immediate trouble on the part of the respiration In seven cases pneumonia developed which was ascribed to this cause but analysis of the cases shows other conditions ample to explain the pneumonia in all but two cases, in which this was not so evident Unilateral vagotomy has even less of an immediate effect on the digestive apparatus than on the heart and respiration Section of the nerve thus is shown to be free from gravity, whether the nerve is sound or degenerated The absence of complications renders it unnecessary to suture the nerve after it has been severed, but this has been done in several cases, and is a legitimate measure when conditions render it possible Reich declares that irritation of the vagus has more serious effects than section, but sifting the cases on record shows that the nature of the irritation determines the severity of the resulting injury, ligating or pulling on the nerve or crushing are more liable to cause trouble Exposing the nerve and mild traction on it does not seem to have any effect on the organs innervated by it By avoiding severe irritation there is comparatively little danger At the same time it is better to sever or resect the nerve in operations in this region rather than to risk irritating it by exposing and pulling on it In any event it should never be ligated or seized except under direct visual inspection as otherwise there may be danger of seizing the nerve too roughly and thus producing a reflex syncope which may be very grave As a rule slight irritation of the vagus modifies the respiration rhythm and causes a spasmodic cough which should be a warning to the surgeon If syncope develops from the reflex irritation it may be wise, besides the usual measures for resuscitation, to sever the nerve In certain cases immediate section of the nerve arrested all the phenomena from the irritation, but this is scarcely necessary Tracheotomy is never needed for the purpose as the trouble is not a mechanical interference with respiration

59 **Osteoplastic Amputation.**—Imbert gives an illustrated description of the technic for osteoplastic amputation of the leg above the knee, and Cotte reports two cases in which he grafted a thin plate of bone from the tibia on the stump, or the epiphysis from the tibia, permitting weight bearing He regards this free epiphyseal osteoplastic operation as an excellent means to close the marrow canal and supply a bone stump the architecture of which seems to be especially designed for weight bearing

60 **Tuberculosis of the Nasal Accessory Sinuses** —Collet says that he knows of only thirty cases of this kind and recovery is reported in only five Treatment must consist in ample exposure and removal of all the diseased tissue He reviews the various cases on record but seems to have no personal experience to report

Lyon Médical, Lyons

October 20 XLIV No 42 pp 637 676

61 *Pathogenesis of Exophthalmos in Exophthalmic Goiter Maurice

October 27 No 43 pp 677 716

62 Laryngeal Tuberculosis in Children Collet

61 **The Exophthalmos in Exophthalmic Goiter** —Maurice maintains that the late symptoms of Basedow's disease, exophthalmos high blood pressure and signs of visceral arteriosclerosis, are due not to the diseased thyroid, but to excessive adrenal secretion Epinephrin is present in the blood of these patients The combined hypersecretion of the thyroid and of the adrenals stimulates the sympathetic nerve system and depresses the central nervous system At this stage of the disease medical treatment is to be preferred to surgical, as the condition of the heart renders anesthesia dangerous

Presse Médicale, Paris

October 30 XX No 89 pp 901 908

63 Improved Technic for Wassermann Test (L emploi des hématies stabilisées par le formol dans la réaction de Wassermann) P F Armand Delille and L Launoy
64 Muscular Sporotrichosis P Moure and P Baufle

November 2 No 90 pp 909 920

65 Agglutination Test for Malta Fever (Comment peut on rendre moins incertaine la valeur diagnostique de la séro réaction d agglutinement du micrococcus melitensis?) M Carrieu and J Anglada
66 Palpation of Large Intestine A Cawadias
67 Dialysis of Normal Urine (L indialysable urinaire à l état normal) H Labbé and G Vitry

Revue Mens de Gynécologie, d'Obst. et de Pédiatrie, Paris

October VII No 10 pp 593 616

68 Responsibility of the Physician Before the Operation P Delmas
69 Inflammation of the Mastoid Region in Infants Five Cases M Zæpffel

Semaine Médicale, Paris

November 6, XXXII No 45 pp 529-540

70 Fat in the Blood with Chronic Nephritis (La lipémie des brightiques rapports de la rétinite des brightiques avec l azotémie et la cholestérinémie) F Widal A Weill and M Laudat

Archiv für Kinderheilkunde, Stuttgart

LIX Nos 1 2 pp 1 160 Last indexed Oct 12 p 1410

71 *Acute Rheumatism with Subcutaneous Nodules in Children (Rheumatismus nodosus im Kindesalter) R Berkowitz
72 *Breast Milk Nursing Premiums (Stillprämien und ihre Erfolge) H Risel and F Schmidt.
73 *Serotherapy of Epidemic Meningitis (Behandlung der epidemischen Genickstarre durch Seruminjectionen in die Seitenventrikel Bericht über einen geheilten Fall) F Levy
74 Appendicitis in Inguinal Hernia in Infant J Becker
75 Housing Conditions as Factor in Infant Mortality in Heated Term (Ursachen der Säuglingssommersterblichkeit mit statistischem Beitrag über die Wohnung als ätiologischen Factor) S Eichelberg
76 Stagnation of Heat as Factor in Infant Mortality (Die Rolle der Wärmestauung und Exsiccation bei der Intoxication der Säuglinge) P Helm
77 Importance of Artificial Feeding on Biologic Properties of Young Organism (Einfluss von künstlicher Ernährung auf biologische Eigenschaften des Organismus in dessen frühem Alter) T A Ossinin

71 **Acute Rheumatism with Subcutaneous Nodules in Children.**—Berkowitz reports five cases and compares them with seventy three in the literature in which small nodules developed symmetrically beneath the skin on or around the smaller joints in children who had had acute articular rheumatism in a severe form *Endocarditis or pericarditis was evident in* 89 per cent of the total seventy eight cases, plus chorea in twenty four cases, with chorea alone in three, and complications on the part of the heart alone in forty one The children were between 8 and 14 in most of the cases The nodules cause no pain or other disturbance and generally retrogress entirely after a few days or months *Berkowitz cites from* Dunn's article, "Rheumatic Fever in Children" in THE JOURNAL, Feb 9, 1907, p 493

72 **Nursing Allowances** —R S the
results of the workings of ng
mothers which has been
small allowance is given to
a certain amount as long
have to bring the infant

allowance is given them, and this medical oversight is by no means the least useful *factor in the nursing premiums* The women are given 25 or 50 cents a day and an additional 10 cents for the first child and about 8 cents for each later child. The annual number of infants ranged from 761 to 824, and the total expended was over $6,000 in 1910 The "consultations" are held at four different points in the city once or twice a week, in the afternoon The educational effect is regarded as of great value, and the children now 2 or 3 years old that had the advantages of the supervision during their early infancy *seem to be much above the average in health and alertness* over other children in their class The total material is tabulated from various standpoints

73 **Serotherapy of Epidemic Meningitis**—In the case reported by Levy an infant three and a half months old developed severe meningitis with paralysis of one side Meningococci were found in the spinal fluid on lumbar puncture, and no benefit was derived from the usual measures, hexamethylenamin, etc As the condition was growing rapidly worse, Levy introduced the needle into the lateral ventricle and injected 8 c c of antimeningococcus serum This was done the sixteenth and seventeenth days of the disease *At one stroke the clinical picture became transformed* The fever dropped, the paresis improved, and all the symptoms disappeared so rapidly that the child seemed to have entirely recovered by the sixth day thereafter Levy gives an illustration of the route for puncture of the lateral ventricle through the fontanel, the child lying on the side of his head He has done this operation on four children with a total of thirty punctures and fourteen injections, without ever experiencing any untoward by effects, except that in this case at the second puncture, as the fluid did not flow promptly he thought he was not in deep enough, and pushed the needle in a little farther, bringing blood He had evidently injured the choroid plexus, but it did not seem to do any harm in this instance Netter has reported ten cases without by effects Fischer has reported a case of erythema, sweating and foam at the mouth after an injection of the kind preceded by rinsing out the ventricle with salt solution, and he had left a large amount of the antiserum in the ventricle Levy warns expressly *against any such procedures and against* injecting any more fluid than is withdrawn The destruction of the cocci by the antiserum may flood the organism with their endotoxins and thus induce a temporary aggravation of the condition He reiterates in conclusion that the experience he relates confirms the tolerance of infants for injections into the lateral ventricles, and that it may have life saving value in otherwise hopeless cases The technic is not always easy, he failed in his first attempt in this case

Beiträge zur Klinik der Tuberkulose, Würzburg

XXV No 1 pp 1 183 Last indexed Nov 9, p 1752

78 *Tuberculin Treatment of Surgical Tuberculosis in Children C Förster
79 The Suction Mask (Bemerkungen zu der Arbeit Berlins in Heft 3 Band *XXIII über Erfahrungen mit der Saugmaske.*) F Kuhn
80 *Blood Borne Dissemination of Tuberculosis (Die hämatogene Verbreitung der Tuberkulose und die Disposition bei Tuberkulose) Wolff
81 Tuberculosis of Biliary Ducts (Sind die Gallengangstuberkel in der Leber das Resultat einer Ausscheidungstuberkulose?) M Lichtenstein
82 Sanatoriums for Tuberculosis Not a Source of Danger for the Environment (Die Tuberkulose Sterblichkeit unter der einheimischen Bevölkerung von Davos) J Gwerder
83 *Analogy Between the Blotting Paper Test for Diluted Acids and the Tuberculin Skin Reaction (Die Uebereinstimmung zwischen dem Verhalten verdünnter Säuren in Löschpapier und der Tuberkulinreaktion *in der Haut*) I Holmgren
84 *Bronchiectasia (Heilstättenerfahrungen über Bronchiektasien) F A. Bauer

78 **Tuberculin Treatment in Surgical Tuberculosis in Children.**—Förster regards the ideal technic as that with which a mild puncture hole and *local reaction is induced* without a distinct general reaction He reports the details of twenty one cases of tuberculous processes in bones or joints in children given a course of tuberculin treatment by this method No benefit was apparent in three cases but in all the others marked improvement resulted which he ascribes in large part to the tuberculin rounding out the ordinary general course of treatment. *He thinks that surgical tuberculosis in children is* an especially fine field for tuberculin therapy With symptoms of "scrofula," the dosage should be guarded with particular care not to permit a harmful reaction, Sahli's method is the *safest in these cases As children with surgical tuberculosis* are exceptionally susceptible to tuberculin, the average dose at first should not be over one or half a millionth of a *milligram* With this dose the puncture hole and local reaction is mild and just what is needed while the minimal general reaction does no harm The children were kept in bed and the anal temperature taken every two hours The dose was not increased until there ceased to be any reaction at the point where the needle had been introduced In case of a reaction, *another dose was not injected until all signs of the reaction* had disappeared, and then half the preceding dose was given When no further reaction was noticed, the dose was increased The blood findings under treatment are tabulated from seven cases Förster uses much smaller doses than others, and he thinks that this is one secret of his success The best results were invariably attained in the cases in which there had been the liveliest reaction to the Pirquet cutaneous tuberculin test

80 **Blood-Borne Distribution of Tuberculosis**—Wolff reviews experiences which confirm the fact that tuberculosis is disseminated within the body by means of the blood The bacilli in the blood stream settle where *an organ offers lessened resistance* by some predisposing elements or defective functioning These anatomic and functional deviations from the normal may be inherited or acquired The apices of the lungs offer a peculiarly favorable point for the settling of the bacilli

83 **Blotting-Paper Test for Acids and the Tuberculin Reactions**—Holmgren's test for gastric acidity by the way the fluid spreads when it is dropped on blotting paper was described in The Journal, March 18, 1911, p 857 He here *calls attention to the resemblance between the aspect of the* Pirquet skin tuberculin test and the phenomena of adsorption on blotting paper, especially the separation into two concentric zones He describes the formulas to express the conditions, and tabulates the findings in large numbers of cases in which the Ellermann Erlandsen titration tuberculin test was applied The formula used to express the acidity in the blotting paper *test applies likewise to the skin tuberculin reaction* For titration test see The Journal, 1909, lii, 1634, and 1912, lix, 1326

84 **Bronchiectasia**—Bauer gives a detailed description of ten cases of bronchiectasia In each case the diagnosis had been pulmonary tuberculosis and the patients had been admitted to the sanatorium on this account. No benefit was derived in any instance from the sanatorium treatment Two of the patients were given operative treatment. The reclining chair *aggravated the cough and expectoration in two cases, the* best results were obtained by lowering the head (Quincke's *Hängelage*) and a course of pills of digitalis leaves and extract of belladonna, 0 3 gm. each, divided into thirty pills one or two a day being taken The treatment was thus such as can be carried on anywhere In all his cases the apices showed about the same findings and were free from autoch*thonous by sounds Conditions thus approximating normal in cases with such severe cough and difficulty in expectoration in young people should suggest the possibility of bronchiectasia* Another differential point is the contrast between the slight percussion findings and the extremely irregular auscultation phenomena With scoliosis the convexity is on the most diseased side, probably from cicatricial shriveling He discusses *the connection between bronchiectasia and pulmonary* tuberculosis Circumscribed bronchiectasia is particularly important on account of its connection with trauma and tendency to hemorrhage In one of his cases the bronchiectasia had persisted in a latent stage for twenty five years, in another for over ten The bronchiectasia often dates from childhood and prophylaxis and early treatment are of great importance

Berliner klinische Wochenschrift

November 4 XLIX No 45 pp 2113 2160

85 *Tabes and Trauma F Schultze
86 Trauma and Infection in Origin of Leukemia (Fall von akuter Leukämie mit zahlreichen Tuberkelbacillen) H *Hirschfeld*

87 *Poisoning from Arsenic in Wall Paper (Ueber Vergiftungen durch arsenhaltige Tapeten) L. Kuttner
88 Cell Inclusions Not Pathognomonic for Scarlet Fever (Sind die Einschlüsse in den polynucleären Leukocyten bei Scharlach als pathognomonisch zu betrachten?) H Bongartz
89 Predisposition of Lungs for Tuberculosis C Serog
90 Methyl Alcohol Poisoning (Zur Frage der Methylalkoholvergiftung) A Rühle
91 An Albino Negro A Blaschko
92 Local Spray Medication of Small Intestine (Zur Technik meiner Behandlungsmethode des Dünndarms mit vernebelten Medikamenten.) M Skaller
93 Vaginal Operative Treatment for Uterine Hemorrhage Would Reduce Infant Mortality (Wie können jährlich 50 000 Kinder in Deutschland gerettet werden?) A Dührssen

85 **Trauma and Tabes.**—Schultze gives the details of three cases in which tabes had developed apparently immediately after a trauma but his investigations showed that it must have existed before the accident. The latter did not have even an aggravating effect on the tabes in two cases, in the third case the new symptoms of tabes that developed after the trauma were localized in the part that had been specially injured This case was further complicated by a traumatic neurosis There was no history of syphilis in any of the cases and the Wassermann test of the blood gave negative findings It is possible that the cerebrospinal fluid might have reacted positively, but Schultze always shrinks from applying lumbar puncture to persons after a trauma Nonne has also recently warned against puncturing "traumatikers." Schultze has witnessed disturbances develop in such cases after lumbar puncture which, in one instance, were more serious than the alleged consequences of the trauma The history of the cases illustrates anew the extreme readiness with which physicians as a rule are inclined to certify to a connection between an accident and a nervous affection The custom of waiting before summoning the medical specialist to ascertain whether the victim has a legal right to an indemnity in any event is very prejudicial to the ultimate welfare of the patient. In one of the above cases a specialist in nervous affections was not called in until five years after the accident. In a fourth case hemiplegia developed a few days after a fall into icy water, the symptoms suggesting a thrombotic obstruction in a cerebral vessel Gradual improvement followed during the next year but then symptoms of tabes became superposed on the hemiplegia The tabes was evidently an independent affection although all the disturbances probably had a common syphilitic basis

87 **Poisoning from Arsenic in Wall Paper**—The wall paper in question was in the sleeping room, and the symptoms of arsenic poisoning were abdominal pain and diarrhea with secondary anemia. As soon as the patients left home the symptoms improved, even without treatment, but recurred after an interval on their return home each time, and the assumption of poisoning from the wall paper was confirmed by tests of the paper In two of the six cases reported arsenic was found in the urine, no examination was made in the other cases The patients were two men and four women, all but two in the thirties The manifestations were of the intestinal catarrhal type in all, the possible persistence of such an intestinal trouble after removal of the wall paper need not invalidate the diagnosis, as complete recovery after chronic arsenic poisoning is rare In two of the cases the anemia was of the pernicious type One patient had not apparently suffered from the arsenic poisoning although occupying the same room two years before, she slept with the windows open then The intestinal catarrh did not develop until after she had been confined to the room for five weeks by a childbirth, the windows mostly closed Kuttner has found arsenic in cheap linoleums, and calls attention to arsenic poisoning from the floor coverings as possible explanation for certain puzzling cases of sickness

Deutsches Archiv für klinische Medizin, Leipsic

CVIII Nos 3 4 pp 187 404 Last indexed Nov 18 p 1832

94 Alimentary Galactosuria as Test of Liver Functioning E. Reiss and W Jehn
95 Alimentary Galactosuria with Experimental Phosphorus Poisoning R Roubitschek
96 Blood Pressure in Cholera and Modification by Saline Infusion (Ueber den arteriellen Druck bei der Cholera asiatica und seine Veränderungen unter dem Einflusse grosser Kochsalzinfusionen) G La
97 Disturbances in Secretion of Hydrochloric Acid with Gall Bladder Disease (Störungen der Salzsäureabscheidung des Magens bei Erkrankungen und nach Exstirpation der Gallenblase.) H Hohlweg
98 Pentosuria (Zur Lehre von der Pentosurie auf Grundlage von Untersuchungen an 2 Fällen) K O af Klercker
99 Dicrotic Pulse A. Weber
100 The Eosinophil Leukocytes in Croupous Pneumonia J Arneth
101 *Tests for Localizing Kidney Functioning (Ueber Nierenfunktionsprüfung) F Conzen
102 *Action of Radium Emanation on the Blood R von den Velden

101 **Testing the Kidney Function**—Schlayer and Takayasu have devised means of determining the anatomical location of the trouble in nephritis If 10 gm of a milk sugar solution is injected intravenously and takes more than five hours for elimination, it indicates diseased glomeruli When 0 5 gm potassium iodid is given by mouth and is not fully eliminated by the end of sixty hours, the tubules are involved Conzen in an examination of thirty seven patients found this method of great aid in diagnosing nephritis and the necropsy findings confirmed his diagnosis as to the seat of the lesion Intake of 10 gm of salt increases the albuminuria and leads to water retention and general malaise only in true nephritis and in severe congestion of the kidney In recent kidney affections particularly when the lesion is focal, the acidity and the amount of albumin run parallel, and the albumin decreases or disappears on the administration of sodium bicarbonate In other forms of nephritis there is no relation between the acidity and the amount of albumin in the urine

102 **Effect of Radium Emanation on the Blood**—Von den Velden states that the radium emanations were administered by inhalation, subcutaneous injection and by drinking water containing emanations. In every instance it was found to decrease the coagulation time of the blood One of the patients was a hemophiliac, and in this case the decrease was particularly noticeable.

Deutsche medizinische Wochenschrift, Berlin

October 31 XXXVIII No 44, pp 2057 2104

103 Development of a Thrombus (Ueber den Aufbau des Thrombus) L. Aschoff
104 Human Tubercle Bacilli in Parinaud s Tuberculous Conjunctivitis Two Cases B Möllers
105 *Improved Technic for Determination of Occult Blood in Stools. (Ueber die Ausschaltung exogenen Blutes beim Nachweis okkulter Magen und Darmblutungen) I Boas
106 Functional Differences of Brain Hemispheres (Die funktionellen Differenzen der Hirnhälften und ihre Beziehungen zur geistigen Weiterentwicklung der Menschheit) F Stier
107 Reflex Anomalies from Medicolegal Standpoint (Zur Bewertung von Reflexanomalien) K Singer
108 Improved Technic for Blood-Count. (Einige Modifikationen und Verbesserungen am Intrumentarium für Hämocytometrie des praktischen Arztes.) A Pappenheim
109 Amputation of the Leg, 217 Cases. (Amputation im Bereiche der unteren Extremität) K. Braeunig
110 Technic for Low Tracheotomy (Die stumpfe untere Tracheotomie mittels Schielhäkchen) R Dobbertin
111 Acute Subchordal Laryngitis W Brandenburg
112 *Blood Test for Industrial Poisoning (Ueber gewerbliche Vergiftungen mit Bezug auf die Liebermannsche Blutprobe) R. Orban
113 Spray Method of Sterilizing Milk (Neues Verfahren zur Herstellung einwandfreier Trinkmilch) O Lobeck

105 **Improved Technic for Test for Occult Blood in the Stools**—Boas removes the blood from the meat given the patients for two or three days before applying the test for invisible blood in the stools He accomplishes this by pouring 100 gm of 3 per cent. hydrogen dioxid over 100 or 125 gm of scraped or chopped veal or chicken, stirring the whole up well as the foaming goes on The meat turns white and it is then rinsed on a fine sieve under running water for five or ten minutes until all the hydrogen dioxid is washed away The meat is then made up into hash balls Meat thus prepared will not interfere with the most sensitive tests for occult bleeding in the stomach or intestines This method is, of course, intended mostly for institutions, but intelligent patients can apply the procedure in their homes as a preliminary to the test It excludes all blood of foreign origin from the feces and thus does away with the necessity for refraining from meat and fish before the test In some cases the use of this meat or fish free from blood pigment may prove a useful in[illegible] for the benefit of therapeutic mea

112 **Industrial Po** [illegible] has f
blood test very useful in [illegible] l d

from lead, mercury, phosphorus, benzine and benzol In his experimental work, lead, mercury and phosphorus increase the resistance of the red corpuscles while benzine and benzol reduce it The Liebermann test is based on the laking of the reds in distilled water and the absence of laking in physiologic salt solution The unit is two minutes for the laking of one drop of undefibrinated blood, that is, 0 05 c c The blood is generally used for the test with a salt solution between 0 4 and 0 7 After two minutes salt solution is added of a concentration which brings the new solution to 1 per cent For example, to 5 c c of a 0 5 per cent solution is added 5 c c of a 1 5 per cent solution, thus bringing the concentration to 1 per cent The resistance quotient is the number of reds which fail to lake under these conditions in proportion to those which are dissolved

Jahrbuch für Kinderheilkunde, Berlin

October, LXXVI No 4 pp 369 506

114 Rachitis in the Newly Born (Ueber Rachitis III) M Kassowitz
115 Toxic Paralysis of the Heart in Diphtheria (Diphtherieherztod) R Rohmer
116 Valve Stenosis After Tracheotomy (Erschwertes Dekanülement infolge von Verbiegung der vorderen Trachealwand nach Tracheotomie superior und Einfluss des Diphtherieserums auf die Zeit der Vornahme des Dekanülements) M Massini
117 *Bacteria Involved in Diseases of the Respiratory Apparatus in Children II G Brückner W Gaehtgens and H Vogt

117 **Bacteriology of Respiration Diseases in Children**—In addition to eighty cases of lung affections reported by Brückner and his coworkers from the Strasburg children's clinic, the results of Holt's examination of over 500 patients are cited Influenza bacilli were present in the majority of cases and are undoubtedly of pathogenic significance Attention is called to the fact that in the years of influenza epidemics the mortality from pneumonia was correspondingly increased Though there is no absolute way of distinguishing influenza infections from infections with other bacilli, they seem to display a tendency to greater variations in temperature, a long course with remissions and exacerbations, and consecutive chronic conditions Recurrent bronchopneumonia and chronic bronchiectasia are a characteristic form of influenza bacillus infection Otitis media is also a frequent complication

Medizinische Klinik, Berlin

November 3 VIII No 44 pp 1769 1814

118 *Diagnosis of Miliary Tuberculosis M Matthes
119 *Pharmacology of the Sympathetic Nerve System H H Meyer
120 *Tuberculosis of the Eye (Erfahrungen und Gedanken über Tuberkulose und Tuberkulin) Heine Concluded in next number
121 Juvenile Paralysis M Rosenfeld
122 Percussion of the Apices of the Lungs in Tuberculosis T G Janowski
123 Vegetation and Civilization (Das mitteleuropäische Landschaftbild in seiner pflanzengeographischen Entwicklung) W Wangerin
124 Medical Department of the Turkish Army (Organisation des türkischen Kriegs-Sanitätsdienstes) E Franck

118 **Diagnosis of Miliary Tuberculosis**—Matthes remarks that the three types described in the text books, the typhoid, pulmonary and meningeal types, are frequently comb[illegible] blend into each other The meningeal symptoms [illegible] develop tardily in contrast to those accompanying [illegible] ordinary infections The diagnosis of miliary tubercul[illegible] is facilitated by discovery of some old tuberculous [illegible] focus or history of such Febrile urogenital or non tuberculous ear processes may simulate miliary tuberculosis [illegible] as in some recent cases of colon bacillus cystitis or [illegible]prostatic abscess In one case a woman with incipient [illegible] miliary tuberculosis aborted and the fever was ascribed to puerperal infection The fever may be low, and sometimes miliary tuberculosis develops without fever or without sweats Great irregularity of the fever is evidence in favor of miliary tuberculosis The heart findings are usually negative although there may be occasional accidental murmurs The pulse is never so soft and small as with sepsis Typhoid bacilli may be found in the blood when miliary tuberculosis attacks a bacillus carrier, and the agglutination test may be positive Matthes noticed in some of his cases great relative reduction of lymphocytes in the blood with a corresponding increase in the polynuclear cells If these findings are confirmed by others this polynucleosis may aid in differentiation On account of the fever, only the Pirquet tuberculin test is of any value, and this is unreliable in adults The livid, dusky face with the negative heart findings is instructive, as also dyspnea and a dry cough without expectoration There may be acute emphysema of the lung and the signs of bronchitis may be most pronounced above the upper lobes Instantaneous skiagrams may show bright pinhead spots, soft and sometimes confluent, very early in the disease The fluid obtained by lumbar puncture contains lymphocytes and more albumin than normal and, on standing, a fine network develops in it, in which tubercle bacilli may be found The pressure is generally above normal or may be subnormal He thinks it would be a good plan to examine the spinal fluid early in every case of febrile disease of obscure origin, even before meningeal symptoms develop The manifestations in the skin may be characteristic by the sloughing in the center of the punctate nodules, but tubercles on the choroid coat of the eye are the one unmistakable sign of the disease

119 **Action of Drugs on Vegetative Nervous System**—Meyer reports the results of his interesting research on the sympathetic system with epinephrin, nicotin, cholin, atropin, etc adding to the store of knowledge in regard to the different functions of these nerves and the localization of the functions

120 **Tuberculosis from the Ophthalmologic Standpoint**—Heine thinks that valuable information might be obtained from specialist examination of the eye under the influence of the tuberculin test He gives a colored plate showing the findings in twenty cases of tuberculosis or syphilis Examination of the eye with specialist equipment, he says, affords a better oversight of the progress of the case than examination of the lungs He has noticed a great difference in the prevalence of positive eye findings in different parts of Germany

Münchener medizinische Wochenschrift

October 29 LIX No 44 pp 2377 2432

125 *Formaldehyd Compounds with Uric Acid (Ueber die Formaldehydverbindungen der Harnsäure und der Purinbasen Ihre Verwendung im Stoffwechselversuch und zum diagnostischen Nachweis der Harnsäure im Blute) A Schittenhelm
126 Cultivation of Diplococcus of Venereal Granuloma E Martini
127 *Chemotherapy of Cancer (Ueber Strahlenwirkung auf Zellen speziell auf Krebsgeschwulstzellen und die Frage der chemischen Imitation derselben) S Tschachotin
128 *Simple Color Test for Fat in Stools (Eine einfache Methode das Fett im Stuhl färberischmikroskopisch nachzuweisen und quantitativ abzuschätzen) L Saathoff
129 *Mental Disease Cured by Gynecologic Measures Seven Cases (7 Fälle von psychischer Erkrankung nach gynäkologischer Behandlung geheilt) G Ortenau
130 *Diphtheria Bacilli in the Lungs E Reye
131 *Polycythemia Two Cases (2 weitere Beiträge zur primären Polyhämie und deren Genese.) C Jacobs
132 *Local Anesthesia for Operations on Pharynx and Esophagus G Hirschel
133 *Fatal Embolism After Injection [illegible] Bismuth Paste (Beck) Into an Empyema Fistula [illegible] M Brandes
134 *Prophylaxis of Gangraed by [illegible] (Beitrag zur Noesske'schen Behandlung der venösen Stase) [illegible] Lehsenfeld
135 *Medicinal Treatment of Cancer (Die Krebsbehandlung mit medikamentösen Mitteln) O Staudenmayer
136 Auto-[illegible]anaphylaxis (Die Auslösung von Ueberempfindlichkeitserscheinungen durch körpereigene Eiweisssubstanz und ihre klinische Bedeutung) A Wolff-Eisner
137 Roentgen Ray Technic (Vergleichsversuche mit Röntgeninstrumentarien) Hergenhahn and R Bosselmann
138 *Destruction of Bile Ducts by Gall Stones (Partielle oder totale Zerstörung von Ductus cysticus und choledochus durch Stein) B Riedel Commenced in No 43

125 **Formaldehyd Test for Uric Acid and Purin Bases.**—Schittenhelm gives the details for a technic which he says is a simple and reliable means to determine the proportion of uric acid in the urine It is based on the fact that the formaldehyd combinations of uric acid readily dissolve in water, while the uric acid and purin bases are very slightly soluble in water

127 **Chemotherapy of Cancer**—The research reported confirms the assumption that the action of the Roentgen rays and of radium depends mainly on the formation of cholin out of the elements of the lecithin, and consequently that cholin may have an elective action on cancer, alone or as an adjuvant to radiotherapy

128 **Color Test for Fat in Stool**—*Saathoff* uses a stain in addition to the heat method of distinguishing between the neutral fats, fat acids and soaps The best formula for the stain is 90 c c glacial acetic acid and 10 c.c. of 96 per cent.

alcohol, into which is stirred a knife point of Sudan III He discusses the importance of the findings in cases suggesting liver and pancreas disease, in metabolic disturbances and bowel trouble in infants, etc He found an abnormally large proportion of fat in the stools in patients with exophthalmic goiter and other thyroid derangement, and the course of the cases could be followed by the increase or decrease of the fat in the stools

129 **Mental Disease Cured by Gynecologic Operations**—Ortenau was amazed at Bossi's reports of the cure of chorea and hysteric paralysis by operative treatment of some lesion in the ovary or uterus (mentioned in The Journal Jan 6 1912, p 73 and elsewhere) He went to Genoa to Bossi's clinic to investigate the subject and reports what he saw there, giving the details of seven typical cases of mental disease entirely subsiding under needed gynecologic operative measures The large proportion of patients with mental disease in the gynecologic clinic was his first surprise, and then the rapid improvement under local measures This is particularly noticeable as the neurologists have long taught that the attention should not be attracted to the genital sphere in mental derangement In each case there was amenorrhea or dysmenorrhea connected with stenosis of the internal os or cervix, entailing infectious endometritis and dilatation of the uterus When these conditions were corrected the psychic disturbances subsided, even severe *mania* which had required isolation of the patient Bossi's plea is that restoration of normal conditions in regard to secretion and a proper outlet is liable to cure in many cases in which neurologic and psychiatric treatment alone is futile One patient presented the typical picture of dementia praecox, others severe melancholia and stupor The ages ranged from 22 to 41 The cases teach the necessity for gynecologic examination in every case of mental disease especially before committing any woman to an asylum Bossi insists that gynecologic examination should be a routine measure in every crime committed by a woman in the period just preceding or during the menses This would certainly, he declares, prevent many errors in justice which are now committed

130 **Diphtheria Bacilli in the Lungs**—Reye examined the lungs from sixty seven cadavers including forty three with recent diphtheria and twenty four after recovery from the diphtheria He found diphtheria bacilli in 85 per cent, in many cases the lungs were apparently entirely sound but the bacilli could be found up to the twentieth day after the onset of the diphtheria

131 **Polycythemia**—Jacobs adds two more to the thirty five cases of polycythemia on record with necropsy The essence of the disease is an increase in all the figured elements of the blood without apparent cause The data related suggest that the disease must be regarded as an abnormal proliferation of the blood elements and serum analogous to the proliferation of tissues in cancer The latter is a neoplasm of the solid tissue and the polycythemia is a neoplasm of the blood with consequent functional hypertrophy of the bone marrow

132 **Local Anesthesia in Operations on the Pharynx and Esophagus**—Hirschel describes the technic with which he blocked the glossopharyngeal nerve for removal of a cancer in the region in three cases, and the vagus for removal of a cancer in the upper part of the esophagus in another case

133 **Embolism After Injection of Bismuth Paste**—Brandes calls attention to the danger of embolism, reporting a fatality immediately following injection of bismuth paste into a fistula connected with an empyema left from pneumonia on the right side The catheter introduced into the fistula seems to have injured the wall at a bend, and the paste injected was thus forced into an adjoining vein whence it was carried into the venous circulation of the lung and, passing through the heart, the particles were scattered through the brain vessels and elsewhere through the body Alapy has reported a similar case but his patient recovered

134 **Prophylaxis of Gangrene of the Finger**—Fehsenfeld reports a case which confirms anew the great value of stimulating the capillary circulation by Noesske's method of cutting down to the bone at the tip of the finger parallel with the nail

135 **Local Treatment of Cancer**—Staudenmayer was quoted by Zeller as having had extensive experience with a 20 per cent arsenic mercuric paste in local treatment of cancer (See the Berlin Letter Sept 7 1912 p 815) He has had no recurrences in the cases in which a systematic course of this local treatment was given, and he never observed symptoms of poisoning Time will show whether Zeller's addition of silicic acid is an improvement He applied this local treatment only when an operation was refused or the patients were too advanced in years The paste does not pass through sound skin so the vicinity of the cancer or lupus patch must be freshened

138 **Destruction of Biliary Duct by a Gall Stone**—Riedel states that eighteen of his 695 gall stone patients had total or circular destruction of the cystic duct and two a partial side destructive process The common bile duct is more resistant he has only had two cases of perforation of the common bile duct among his 128 cases of stone in this duct The walls of the cystic duct are thin but it is very rare that a stone perforates into the open abdominal cavity, an abscess generally forms around the perforation or bulging duct and the common duct is thus secondarily involved The great danger from the opening in the cystic duct walls is that the flow of bile is less direct and consequently stones are not washed along in either the cystic or common duct

St Petersburger medizinische Zeitschrift

October 28 XXXVII No 20 pp 293 310

139 Indications for Operative Treatment of Gastric Ulcer P Klemm
140 Alcohol and the Human Organism K Dehio
141 Toxicity of Certain Berries (Zur Frage der Giftigkeit einzelner Beeren) Kanngiesser

Therapie der Gegenwart, Berlin

November LIII No 11 pp 481 528

142 Present Status of Salvarsan Treatment of Syphilis (Ueber den gegenwärtigen Stand der Salvarsantherapie der Syphilis) W Wechselmann
143 *Acute Exophthalmic Goiter (Meine Erfahrungen über den akuten Morbus Basedowii) H Schlesinger
144 Serotherapy (Ueber die Nutzanwendung der neueren Forschungsergebnisse auf dem Gebiete der Serumtherapie in der Praxis.) F Rolly Commenced in No 9
145 *Continuous Draining of Ascites (Zur Dauerdrainage bei Ascites) Osten
146 Shoulder Pain with Appendicitis (Schulterschmerz bei Appendicitis) Lochmann

143 **Acute Exophthalmic Goiter**—Schlesinger comments on the deceptive clinical picture sometimes presented by acute Basedow's disease, simulating cancer, lymph node tuberculosis or typhoid In his experience the patients came to the hospital with the diagnosis of hidden cancer The leading symptoms of exophthalmic goiter may be missing and the more uncommon symptoms predominant The most striking symptom is the rapid loss of weight, this is more rapidly extreme than even with cancer One such patient lost forty four pounds in a month, another sixty six pounds in ten weeks, and in a recent case the patient's weight dropped from 189 to 61 pounds —a loss of two thirds of her weight in eleven weeks Acute exophthalmic goiter should be suspected in every case of rapid loss of weight Another frequent symptom is enlargement of the spleen Fever is more common with the acute than with chronic Basedow In the acute cases the thyroid may be normal in appearance or even smaller than usual but auscultation reveals the vascular murmurs of true Basedow, soft, continuous, with rhythmic systolic accentuation or an arterial sibilant sound during the systole This rare type of systolic vascular murmur he has encountered only in elderly patients with Basedow A persistent retraction of the upper lid—Stellwag's sign—was observed very often and [illegible]ly and tachycardia was constant The [illegible] istic of Basedow but the arteries are [illegible] thin walls The blood chan[illegible] chronic exophthalmic [illegible] out cause or after [illegible] tite or none In three [illegible] tion were the only [illegible]

acute exophthalmic goiter Glycosuria is often observed also, the emaciation is sometimes ascribed to this alone Alimentary glycosuria could always be elicited in his cases, and the reaction was positive in the one case in which the alimentary galactosuria test was applied A correct diagnosis is particularly important as persons with acute exophthalmic goiter are exceptionally susceptible to external injurious influences, an insignificant operation, a brief general anesthesia or mild infection may prove fatal. Many such cases have been published and it is safe to assume that numbers of others have not been reported. One of his patients with acute exophthalmic goiter died suddenly a few hours after the onset of an ordinary follicular tonsillitis No cause for the sudden death could be discovered in another similar case He suggests that as hypoplasia seems to be a constant necropsy finding in such cases, the acute Basedow develops only when the injuries resulting from excessive or perverted thyroid secretion affect a hypoplastic individual In the absence of the tendency to hypoplasia, only the chronic form develops The more stormy onset of the acute form is the result of the lesser resisting powers of the hypoplastic The logical conclusion is that it is extremely dangerous to do an operation on persons with acute Basedow, every effort should be made to cure or at least to transform the acute into the chronic form Schlesinger keeps the patient in bed, preferably in the open air The food should be extra nourishing and digestible, avoiding sweets and much starch on account of the tendency to glycosuria Among the adjuvants he mentions Roentgen ray exposures, the advantage from which in these dangerous acute cases far outbalances the possible harm from the development of connective tissue rendering more difficult any operation on the thyroid later Very mild physical measures may also prove useful, including application of the continuous current to the neck

145 **Continuous Drainage of Ascites**—Osten has a patient who taps herself at need as she wears permanently a drain tube, clamped Except for nausea for a few days, there has been no disturbance from the drain during the three months it has been worn not even a local inflammatory reaction although the woman of 62 is a diabetic with cirrhosis of the liver The same technic might prove useful for an ovarian cyst in case operative measures are contra indicated

Zeitschrift für Kinderheilkunde, Berlin

V No 3 pp 175 254 Last indexed Nov 16, p 1835

147 *Pathogenesis of Fetal Chondrodystrophy (Zur Pathogenese der Mikromelie) H Abels
148 Chloromatous Bronchitis H Lehndorff
149 *Glass Partitions in Children s Ward (Die Boxstation der Neuen Wiener Kinderklinik) C v Pirquet
150 Respiratory Metabolism in Proportion to Surface Area of Infants (Atrophie und respiratorischer Stoffwechsel) A Schlossmann

147 **Defective Development of Cartilage in the Fetus.**—From a study of a case of his own and those reported in the literature, Abels concludes that the cause of fetal chondrodystrophy is a disturbance of the internal secretions, in some cases of the thyroid, in others of the sexual glands There is in most cases an enlargement of the genitalia and in many cases an enlarged thyroid in the mother He cites one case of a woman who took thyroid extract during her pregnancy and gave birth to a chondrodystrophic fetus

149 **The Box Ward in the Vienna Pediatric Clinic**—Children are often admitted to general hospitals when already infected with some contagious disease To avoid the danger of house infection from such cases at the children's clinic in Vienna two series of six small glass walled rooms (boxes) were erected, each containing one bed Between the two rows of rooms is a corridor for the use of visitors and students The glass walls enable them to see the children without the possibility of transmitted infection Suspicious cases, or those developing sore throat, coryza or eruptions after admission are placed in these rooms They are not used for the more dangerous infections, such as cholera or small pox. They are easily disinfected so that they can be used again as soon as vacated, and there has been no instance of an infection being transmitted to the next occupant The children although thus scrupulously isolated can see all that is going on in the ward. The article is illustrated.

Zentralblatt für Chirurgie, Leipsic

November 2 XXXIX, No 44 pp 1505 1536

151 Pedunculated Flap from Capsule to Reenforce Suture After Pyelolithotomy E Payr

November 9 No 45, pp 1537 1568

152 Ear Muscle to Substitute Defect in Nostril (Ersatz von Nasenflügeldefekten durch freie Transplantation aus der Ohrmuschel nach König) A Reich
153 Solitary Cysts in the Kidneys (Beiträge zur Nierenchirurgie. 2 Fälle von Nierencyste) R Vogel

Zentralblatt für Gynäkologie, Leipsic

November 2 XXXVI No 44 pp 1457 1488

154 Attempt to Induce Abortion in Absence of Pregnancy (Tentamen abortis provocandi deficiente graviditate.) H H Schmid and A Mueller
155 One Hundred Obstetric Operations in the Home (Puerperal fieber und häusliche Geburtshilfe) M Schwab

November 9 No 45 pp 1489 1528

156 Treatment of Eclampsia (Zur Eklampsiefrage Die Therapie der mittleren Linie und einige Bemerkungen zur Pathologie der Eklampsie) F Engelmann
157 Theoretical Basis for Stroganoff's Prophylactic Treatment of Eclampsia W Stroganoff
158 Ophthalmia Neonatorum (Hat die Blennorrhoea neonatorum abgenommen?) C Credé-Horder (Zur Technik der Credé schen Blennorrhoeprophylaxe) G Weidenbaum
159 Facial Paralysis After Spontaneous Delivery (Facialislähmungen nach spontaner Geburt.) P Carlsson

Gazzetta degli Ospedali e delle Cliniche, Milan

October 29 XXXIII No 130 pp 1361 1368

160 High Frequency Electric Currents Do Not Influence the Arterial Blood Pressure A Maragliano

October 31 No 131 pp 1369 1376

161 Fever (La febbre dal punto di vista clinico) V. Ascoli and G Boeri Commenced in No 130
162 Experimental Anesthetization by the Rectum (Per la retto-etero narcosi sperimentale) D Giacomo

Policlinico, Rome

November 3 XIX No 45 pp 1629 1664

163 Differential Diagnosis of Tumors in Pelvis and Abdomen T Pontano
164 Noma Cured by Diphtheria Antitoxin (Caso di guarigione del noma ottenuta col siero antidifterico) G Trotta
165 Whooping Cough (Alcune considerazioni sulla tosse convulsiva) A Delleplane

November Medical Section No 11 pp 479 526

166 Diagnosis of Hour-Glass Stomach (Diagnosi clinica e diagnosi radiologica in un caso di stomaco biloculare) P Masserini.
167 Respiration with Stenosis of Upper Air Passages (Lo studio grafico del respiro nelle stenosi delle prime vie aeree.) G Bilancioni.

Riforma Medica, Naples

October 26 XXVIII No 43 pp 1177 1204

168 *Acute Hemorrhagic Pancreatitis Following Operation for Strangulated Hernia L. Ferrannini and R Scalia

168 **Hemorrhagic Pancreatitis**—In the case reported the first signs of the pancreatitis came on the third day after an operation for incarcerated left inguinal hernia in a woman of 51 Death followed in a few hours and the necropsy findings indicated that the acute hemorrhagic pancreatitis was due to an embolus formed in the vein of the loop of intestine involved and released by the reduction of the sac of the loop The peritoneum, intestine and surgical wound were all in good condition, confirming the assumption of a direct connection by the embolus link between the incarcerated hernia and the hemorrhagic pancreatitis

Revista de Medicina y Cirugia, Havana

November 10, XVII No. 21 pp 589 628

169 The Mycoses in Cuba (Tricofitosis exascosis, esporotricosis, etc.) J Sordo

Semana Medica, Buenos Aires

October 10 XIX No 41 pp 693 752

170 Acute Anterior Poliomyelitis and Pregnancy (Poliomielitis anterior aguda del adulto y embarazo) U Fernandez.
171 Ileus from Invagination Simulating Appendicitis (Caso de oclusion intestinal por invaginacion) G B Arana
172 Alcoholism in the Argentine Republic. V Delfino

Hospitalstidende, Copenhagen

October 30 LV No 44 pp 1261 1292

173 Breast Milk in Infant Clinics (Om Anvendelse af Ammer i Børneklinikken) C E. Bloch
174 Histologic Determination of Acidosis in Inanition A Nielsen

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VISCERAL ORGANISMS *

ALEXIS CARREL, M D
NEW YORK

In previous articles[1] it was shown that connective tissue could be kept *in vitro* for several months in a condition of active life, and that a fragment of heart could pulsate normally for more than one hundred days after its extirpation from the animal, but the quantity of connective tissue maintained in permanent life was very small It would be important, for the study of many problems, to keep entire organs alive outside of the organism Therefore I attempted to develop a technic by which a system of organs could be caused to live *in vitro*

The method consisted of removing aseptically, *en masse*, heart, lungs, liver, stomach and part of the intestines, pancreas, adrenals, kidneys and spleen of an animal, a cat generally being used, and preserving these organs in an incubator at the temperature of 38 C (100 4 F), while the lungs were being artificially ventilated

The operation comprised five stages

1 A cat was etherized The skin of the anterior part of the neck, thorax and abdomen was sterilized Then the esophagus was ligated and severed under aseptic technic The trachea was cut transversely and a glass tube inserted in its lumen A catheter was introduced into it as far as the bifurcation, according to the Meltzer and Auer method

2 The abdomen was opened The aorta and vena cava were tied and cut in the lower part of the abdomen The small intestine was cut under aseptic technic The ureters were severed Then the aorta and vena cava were isolated from the posterior walls of the abdomen and their posterior branches tied The peritoneum surrounding the kidney was dissected The splanchnic nerves were cut Then the abdominal viscera were wrapped in a Japanese silk towel, thus being completely separated from the abdominal wall They remained united to the animal by the aorta and vena cava

3 The thoracic cavity was opened and the mammary vessels were clamped Then the thorax was severed longitudinally, and the diaphragm completely separated from the thoracic wall Artificial respiration was established The anonymous arteries were tied, and the animal died The superior vena cava and the azygos vein were tied and cut The vagus, sympathetic and phrenic nerves were severed All the posterior branches of the thoracic aorta were cut Generally the heart pulsated weakly and the blood-pressure was very low

4 Then the thoracic and abdominal viscera, united through their blood-vessels, were removed from the cadaver of the animal, and placed in a tray containing Ringer's solution, at about 38 C Ordinarily the heart still pulsated slowly and regularly But the blood-pressure was very low, the arterial pulsations weak and the appearance of the organs very anemic A careful hemostasis of the small vessels was made After a few minutes the blood-pressure rose and, in a few cases, became almost normal Generally a blood transfusion was made from the carotid artery of another cat to the inferior vena cava of the visceral organism Then the lungs became pink the blood-pressure was higher than normal and the heart was beating strongly from 120 to 150 per minute The abdominal aorta pulsated violently and strong pulsations could be seen in the arteries of the stomach, liver and kidneys Peristaltic contractions of the stomach and of the intestines were observed If a few minutes after the transfusion, the pressure was still above normal, a quantity of blood was allowed to flow from the lower part of the abdominal aorta Then, the appearance of the viscera was the same as the viscera of a normal animal

5 The visceral organism was placed in a tin box filled with Ringer's solution, covered with thin Japanese silk and protected by a glass cover The tracheal tube and the esophageal tubes were fastened to proper openings in the anterior wall of the box Artificial respiration was carried on by a continuous current of air interrupted ten times per minute Dr Meltzer kindly examined the respiratory conditions in these experiments, *showing me a method for obtaining a proper ventilation* of the lungs He has contributed, in a large measure, to the rapid success of these experiments Water or food could be injected into the stomach through the esophageal tube The intestine was pulled through a glass and rubber tube fixed through the posterior wall of the box The end of the intestine was fixed by a circular suture to the edge of the rubber tube, an artificial anus being made The box was then put into an incubator at a constant temperature of about 38 C

It was then observed that the viscera were living in an apparently normal condition The pulsations of the heart and the circulation of the organs were normal The intestine emptied itself through the artificial anus by regular peristaltic contractions When the intestine was empty, bile and intestinal juices were evacuated In an experiment in which the stomach was full of meat at the time of death, normal digestion occurred After five or six hours, hyperemia of the peritoneum of the intestine appeared It seemed as though peritonitis developed progressively and in some cases the intestine was paralyzed Nevertheless, the circulation remained excellent and a section of a small mesenteric artery produced an abundant hemorrhage.

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* From the Laboratories of the Rockefeller Institute for Medical Research

[1] Carrel Alexis Rejuvenation of Cultures of Tissues The Journal A M A Nov 11 1911 p 1611 Jour Exper Med 1912 xv, 516 Pozzi, C R Bull de l Acad. de méd Paris, June 1912

Some of the visceral organisms died almost suddenly after three or four hours, but most of them were still in normal condition ten hours and even twelve and thirteen hours after the death of the animal to which the organs belonged. The death of the visceral organism was announced by some irregularities in the pulsations of the heart, which were also weaker. Then the heart stopped suddenly.

In the last experiment the death of the visceral organism occurred thirteen hours and fifteen minutes after the death of the cat from which it originated. It is probable that the duration of life will be increased by certain modifications of the technic, but, as it is, a visceral organism can profitably be used for the study of many physiologic and chemical problems.

Sixty Sixth Street and Avenue A.

A STUDY OF THE CAUSES OF DEATH IN ONE HUNDRED PATIENTS WITH HIGH BLOOD-PRESSURE *

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NEW YORK CITY

In a study of the subsequent histories of some 500 persons showing a systolic blood-pressure of 170 or over, seen in my consulting practice or in that of my father during the past eight years, it was found that approximately 150 patients were known to have died. For 100 of these, accurate information as to the date of death, the exact cause of death, and the important later symptoms was obtained. The latter data I owe largely to the prompt and cordial cooperation of the family physicians of these patients in answering my somewhat numerous inquiries, and I desire here to express my appreciation of their assistance. A study of this character, of an essentially chronic group of diseases, is possible only in private practice among patients of the intelligent classes; it is impossible with any hospital material, however large. Many of the problems regarding the causation and development of the so-called degenerative diseases of later life are to-day a fruitful field for truly scientific investigation by the general practitioner.

From the very nature of the investigation, the exact determination of the primary disease underlying the state of high arterial pressure in each case is impossible, and the clinical diagnosis must be a matter of personal opinion based on a consideration of all the symptoms and signs during life. An ideal study would include a complete autopsy of each case, but for the purposes I had in view, 100 cases of hypertension followed from the first symptom to death, with notes of my personal observations are of more value than a like number of hospital autopsies. My personal impression, gained in part from such a hospital experience of a one-sided kind, the patients being of the lowest social class, has always been that the most frequent mode of death in chronic nephritis is by gradual cardiac insufficiency. My desire to obtain exact information on this point among the well-to do and further to determine, if possible, whether the initial symptom or the prominent early symptoms associated with high blood-pressure are indicative of the probable death to be expected and, therefore, to be guarded against, was my motive in undertaking the analysis. It is clear from the character of the material studied that the less chronic and more progressive types of nephritis associated with marked general edema will be inconspicuous as contrasted with their frequency in a hospital service.

CLASSIFICATION BY CLINICAL DIAGNOSES

My clinical diagnoses of the primary underlying diseases of 100 patients were as follows:

Chronic nephritis (*no attempt to differentiate anatomic types*)	79
Diabetes	7
General arteriosclerosis	4
Coronary sclerosis	4
Aortic regurgitation (possibly syphilitic aortitis)	2
Aortic aneurysm (probable)	1
Primary myocardial disease	1
Paroxysmal tachycardia (with secondary myocardial insufficiency)	1
Hypertension without nephritis, evident arteriosclerosis, or cardiac disease	1
Total	100

In all the cases of diabetes, chronic nephritis or some manifestation of arterial disease had supervened on a preexisting diabetes. This, of course, is common, and the figure is almost identical with my statistics of four deaths from chronic nephritis among fifty fatal cases of diabetes observed within the same period. Out of 220 diabetics, again, fifty showed high blood-pressure—another evidence of the frequent association of cardiovascular and renal disease with diabetes in elderly individuals. In the younger patients with pure diabetes, terminating so frequently in coma, high blood-pressure is not observed; diabetes, therefore, stands in no direct causal relation to the high blood-pressure, but in individuals past middle life it seems to predispose to the development of those changes which produce hypertension. Elliott has reported similar findings, which contradict the idea of Potain that diabetes is a hypertensive disease.

In the entire series, pericarditis was definitely diagnosticated once and suspected only one other time. Since pericarditis is found at autopsy in such patients distinctly more frequently than this it is highly probable that it was overlooked. Of the four cases of arteriosclerosis without proof of nephritis in one there was a pressure of 170, and in the other three it was over 200. It is possible that these patients had contracted kidneys, for as a rule general arteriosclerosis is unassociated with increased blood-pressure. On the other hand many of the younger individuals in this group with evidences of severe chronic nephritis showed the most extensive and extreme peripheral arteriosclerosis. Of the five patients below 40 years of age, however, only two men, respectively 32 and 36 years old, had arterial thickening, but in them it was extreme. In the non-fatal cases of the larger group of 500 are a number of patients in whom high blood-pressure and associated cardiac hypertrophy are the only objective evidences of disease. The latter are largely women. The single similar case in this series of deaths was a woman, aged 74, who had had high blood-pressure for six years, associated only with neuralgic pains and mental depression. Her pressure ranged between 190 and 200. She died of pneumonia, having developed some symptoms of failing heart during the months preceding her death.

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

SEX AND AGE INCIDENCE

Among 100 cases, 74 were men, 26 women Of the women, 22 were or had been married and four were single

The ages at death were known in 114 cases They ranged as follows

Below 20 years,	2 cases, about	2 per cent
20 29 years,	0 cases, about	0 per cent
30 39 years,	3 cases, about	3 per cent
40 49 years,	24 cases, about	21 per cent
50 59 years,	39 cases, about	34 per cent
60 69 years,	32 cases, about	28 per cent
70 and over,	14 cases, about	12 per cent
	114	

The youngest patient in the group was 16 years old, the disease following two years after a mild scarlet fever The oldest patient was a man of 80, in whom arteriosclerosis and retention from a hypertrophied prostate seemed to be causative factors

ETIOLOGY

I have not attempted a study of the etiologic factors, since I propose to do this for the whole group of 500 cases One fact of interest may, however, be mentioned here In only one of the twenty-six women did chronic nephritis originate during pregnancy The group includes another case of great etiologic interest—that of a physician of 44 who, while attending a confinement case in the country, was obliged to spend forty-eight hours in a freshly painted room He developed lead colic immediately and after two weeks lead neuritis, which was progressive, and he came to me on account of this His urine had been found normal in a life-insurance examination made just previous to his illness, albumin appeared a month after the wrist-drop, and I saw him at the end of one year He then showed extensive muscular atrophy, hypertrophied heart with accentuated aortic second sound, a systolic blood-pressure of 180 and very slight arteriosclerosis, the specific gravity of the urine was 1 012, with a large amount of albumin and a few hyaline casts The lead line was still visible on the gums His red cells showed marked granular degeneration One week after my examination he went into sudden coma and died in thirty-six hours

CLASSIFICATION OF 100 CASES BY CAUSES OF DEATH

Of the 100 cases, the immediate causes of death were as follows

Gradual cardiac insufficiency	29
Uremic convulsions or sudden coma	15
Chronic uremia	20
Uremic psychosis	1
Cerebral apoplexy	14
Acute edema of the lungs	4
Angina pectoris	3
Sudden death (unclassified)	4
Progressive anemia	2
Acute pneumonia	4
Unrelated diseases	4
	100

In the above classification I have attempted to determine what was the most important cause of the fatal issue Very frequently, cardiac insufficiency was followed by acute or chronic uremia, or was accompanied by anemia in a few cases, but in all such instances the death was recorded as due to cardiac insufficiency Similarly, when uremic convulsions supervened on a chronic uremic state, the death was credited to the latter When, however, cardiac failure developed during a terminal uremic state, death was held to be by chronic uremia It is quite possible that the fifteen cases of more acute uremic manifestations include a number in which autopsy would have shown apoplexy as the real cause Under acute edema of the lungs I have classed only cases of those patients who died of sudden suffocative pulmonary edema, without marked symptoms of preceding heart weakness In addition to the three patients who died of anginal attacks, a fourth was characterized throughout by equally severe attacks which persisted until the day of death, but the fatal issue was brought about by gradual heart failure with anasarca and dropsical effusions Four patients developed severe anemia, of these, one died of uremic convulsions and one of gradual heart failure

Of the other two in whom death was due to anemia and exhaustion, one was a girl of 19 who had had acute nephritis during diphtheria at 9 The original attack was characterized by profuse hematuria There were frequent recurrences of hematuria, with fever, scanty urine, headaches, gastro-intestinal disturbances, edema of nephritic type, and, after menstruation was established, increasingly severe uterine hemorrhages When seen four months before death she showed a double aortic murmur, with a greatly hypertrophied heart, a blood-pressure of 200 systolic, 125 diastolic, low-gravity urine with a large amount of albumin, and loaded with granular and hyaline casts The eye-grounds showed old hemorrhages In this case a hemorrhagic tendency seemed to be manifest throughout There was no history of a "bleeder" family, so that the tendency must have been associated with the nephritis and endocarditis There was no evidence of bacterial endocarditis, but no blood-cultures were made

The other patient dying of anemia is a striking example of a type which I think is frequently overlooked, though unquestionably rare She was a widow, aged 55, with a strong family history of cardiovascular disease Six and one-half years before her death she had had a supposed "nervous prostration," one year later she had an attack of dizziness and aphasia lasting one hour From then until one year before death her blood-pressure ranged between 210 and 230 systolic, with a moderately hypertrophied heart, an aortic systolic murmur and moderate arteriosclerosis The urine was always normal in quantity and specific gravity, with an occasional trace of albumin and a few casts until the last two years, when the specific gravity fell The only symptoms were lassitude and slight dyspnea on exertion Eight months before death she developed nausea and anorexia which became extreme, with attacks of sore mouth and of diarrhea after eating She showed complete achylia and an increasing secondary anemia She gradually became emaciated, becoming more and more sallow and weak, and her blood-pressure fell to about 170, where it remained until death She died of anemia and inanition At no time was the blood morphology that of pernicious anemia, and there was no evidence at all of carcinoma This type of death, by progressive anemia, occurs from time to time, and at autopsy only unsuspected contracted kidneys are found to account for it

The uremic psychosis occurred in a man of 60, with a history of recurring gout for [illegible] ars and evident chronic nephritis with a bl[illegible] f 200, hypertrophied heart and mod[illegible] had no symptoms until five mo[illegible] to show loss of control [illegible] death, following a [illegible] active delirium with delusions, constant incoherent talk, and complete disorientation, without much restlessness and no twitching or other usual uremic symptoms He died in this state Whether the condition was one of rapid organic dementia or of uremic insanity it is difficult to determine

RELATION OF LENGTH OF ILLNESS, INITIAL SYMPTOM AND PROMINENT EARLY SYMPTOMS TO CAUSES OF DEATH

A computation of the duration from the earliest recorded symptoms which could be associated with high blood-pressure or chronic nephritis to death, in all those cases in which it was possible, showed no striking differences between the various groups (Table 1)

TABLE 1—DURATION OF ILLNESS IN RELATION TO CAUSES OF DEATH

Causes of Death	Cases	Duration Average Yrs	Average Mos	Longest Yrs	Shortest Yrs	Shortest Mos
Cardiac insufficiency	26	3	10	10		4
Acute uremia	14	3		8		5
Chronic uremia	21	3	1	7		4
Cerebral apoplexy	14	4	6	11		11
Angina pectoris	3	4	3	6	3	6
Acute edema of lungs	4	3		4	1	8

A careful classification of the cases grouped under each cause of death with reference to the initial symptoms did not show much of importance, as the initial symptom in many cases was not readily related to the time of development of the high blood-pressure or of the evidences of nephritis A somewhat larger proportion of the patients who died of cardiac insufficiency (twelve out of twenty-nine) began with dyspnea on exertion, as contrasted with the other groups Two of the patients who died of acute uremia, five of those of chronic uremia, and two of those of apoplexy began with headaches, whereas only one of the much larger group of cardiac insufficiency did so Paroxysmal dyspnea was the initial symptom in five patients dying of cardiac insufficiency and in one that died of edema of the lungs, but in no others Polyuria as an initial symptom was noted by three of the patients dying of chronic uremia, two dying of apoplexy, and one dying of heart failure Neuralgic pains and neurasthenic symptoms, physical or mental, came first in a few cases Loss of flesh, nose-bleed, hemoptysis, and gastro-intestinal disturbances occurred in a still smaller number

The entire 100 cases have been tabulated under the prominent early symptoms, and simultaneously subdivided into the groups already given under causes of death (Table 2)

TABLE 2—THE RELATION OF PROMINENT EARLY SYMPTOMS WITH HIGH BLOOD-PRESSURE TO CAUSES OF DEATH

Symptoms: Dyspnea on Exertion	Paroxysmal Dyspnea	Edema of Lungs	Anginoid Pain	Edema of Legs	Polyuria	Headache	Visual Disturbances	Hemiplegic Attacks	Loss of Flesh	Neurasthenic Symptoms	Causes of Death	No of Deaths
24	13	1	5	7	8	1	1	2	2	1	Gradual cardiac insufficiency	29
7	2	0	1	0	7	2	1	2	3	3	Uremic convulsions or sudden coma	17
5	1	2	3	0	11	8	5	4	5	1	Gradual uremia	20
6	2	0	2	2	2	2	1	4	0	4	Cerebral apoplexy or its results.	14
1	1	0	2	0	0	0	0	0	0	0	Angina pectoris	3
2	2	1	1	1	1	0	0	0	1	1	Edema of the lungs	4
3	3	0	1	1	3	2	0	1	3	6	Other causes	13
48	24	4	15	11	32	15	8	13	14	16		100

Several facts of real significance for prognosis appear from a study of these symptoms which, as I have indicated by the double line in the table, seem to fall roughly into two classes, the first rather definitely cardiac symptoms and the second symptoms which must be interpreted either as toxic or as due to localized vascular disease in the brain Out of forty-eight patients showing dyspnea on exertion as a prominent early symptom, twenty-four died of cardiac insufficiency, or, from the other standpoint, of twenty-nine patients dying of cardiac insufficiency, twenty-four complained of definite dyspnea on exertion early in their disease This proportion is higher than that found in any other group The same relation holds good for paroxysmal dyspnea, thirteen of the twenty-four patients exhibiting this symptom also died a cardiac death In this group one also sees that two of the four patients who died of edema of the lungs had attacks of sudden dyspnea, and one other had attacks of recurring edema of the lungs Fifteen patients had early anginoid pain on exertion, only two of these died of angina Of eleven patients showing edema of the legs in the early stages of illness, seven died of insufficient hearts, none of uremia

On the other hand, out of thirty-two patients who noted polyuria or nocturnal frequency of urination at the beginning of their illness, eleven died of chronic and seven of acute uremia, while only eight died of insufficient hearts, though this was a much more frequent cause of death for the whole group The relationship of certain forms of headache and subsequent uremia is equally striking Eight out of fifteen patients complaining of headache died of chronic uremia, two of acute uremia, two of apoplexy and only one of heart failure The distinctive early-morning headache of nephritis, passing off toward noon, or intense and persistent headache, seemed to be the types associated with the most serious outlook Many of these patients suffered from past migraine, which was not considered in making these tabulations Migraine, of course, has no such prognostic significance The majority of these patients recognized the change in the character of their headaches

Early ocular symptoms also appeared preponderantly in those patients who died of chronic uremia (five out of eight in all) Early hemiplegic attacks occurred thirteen times, four times in patients who afterwards succumbed to apoplexy Of the others, four died of chronic and two of acute uremia, two of insufficient hearts, and one of anemia An early uremic convulsion was noted once in the cardiac group and once in each uremic group Marked loss of flesh occurred fourteen times, and five of these patients died of chronic uremia

So far, then, as conclusions may be justified from a study of a group of one hundred cases so selected, the following seem reasonable

1 The early occurrence of dyspnea, whether on effort or of the paroxysmal type, in a patient with high blood-pressure indicates marked danger of cardiac insufficiency In such patients the disease must be treated as a cardiac disease, especially by safeguarding methods

2 Anginoid pain, even when of marked severity, occurring on exertion in persons with high blood-pressure, does not make the prognosis worse than do other cardiac symptoms Of course, every precaution must be taken to prevent overexertion The majority of these patients will not die in an anginal paroxysm

3 Complaint of polyuria, nocturnal frequency, marked headache, or of visual disturbances by a patient with high blood-pressure, especially if that patient be below 50 years of age, should make the prognosis very guarded, for uremia is a frequent mode of termination in such cases

131 East Sixtieth Street.

ABSTRACT OF DISCUSSION

Dr L. F Barker, Baltimore I should like to emphasize, and just as strongly as has Dr Janeway, the relation of many of these cases with high arterial pressure to disease of the arteries themselves If you will recall the statistics given you will note that 75 per cent of the patients had chronic renal disease, 7 per cent had diabetes, 4 per cent had an evident arteriosclerosis and 4 per cent had coronary sclerosis It seems to me probable that many of the renal cases were really atherosclerotic in origin It is uncommon in these cases to find a high grade of arteriosclerosis of the palpable peripheral blood vessels Recent pathologic studies have revealed changes in the small arteries which supply the internal organs, especially the kidneys, brain and heart These cases we usually refer to as instances of chronic nephritis with high blood pressure In all probability most are due to arteriolar disease, not to disease of the larger arteries Indeed, one might be entirely misled by feeling the larger arteries Some of the cases were doubtless instances of chronic (diffuse) glomerulonephritis, as was the one referred to by Dr Janeway which followed scarlet fever

Streptococcus toxins can cause an acute inflammation of the glomeruli, which may go on to a chronic diffuse glomerulonephritis In the cases of hypertension that terminate fatally, myocardial insufficiency, with or without uremia, is a common end phenomenon Many of us fail in the treatment of these cases of chronic renal disease, cases with high blood pressure, because of our failure to direct the treatment more toward strengthening the heart muscle There should be enjoined rest in bed, a limited diet, cardiac tonics and digitalis (even with high blood pressure) as soon as signs of myocardial insufficiency set in

What I have just said leads me to sound a note of warning against the indiscriminate use of vasodilators in these conditions, and especially against the excessive use of nitroglycerin, the nitrites and allied drugs I think that more harm than good comes from the use of vasodilators in the cases we are now discussing Over and over again I have seen, as the result of reducing the blood pressure, a sudden collapse, the patient exhibiting anuria, dyspnea and signs of uremia Some of the patients can be saved, or could have been saved, by stiff doses of digitalis or strophanthus These patients must have a high blood pressure in order to give the organs a proper blood supply The patient is exposed to two great dangers that of too low blood pressure on the one hand and too high blood pressure on the other In rare instances with a very high blood pressure, one may cautiously attempt to reduce this pressure because of the danger of cerebral apoplexy, even here, as a rule, more is accomplished by rest, purgation and diet than by vasodilators

Dr Louis Faugeres Bishop, New York I believe that the treatment of arteriosclerosis and the proper understanding of it, and the advances in its treatment in our endeavors to help these patients, must be founded on pathologic physiology and chemistry and not on pathologic anatomy alone I believe that there are many cases due to chemical damage produced by amino-acid poisons in particular, an auto intoxication Dr Janeway has dwelt on the terminal cases What can we do for extreme cases? I do not do any work now in medicine except deal with patients with heart disease and arteriosclerosis I am sure that in at least three cases I have saved lives and restored the patients to a fair degree of safety by abstracting about 1 quart of blood by phlebotomy, followed by a regimen There is too much blood in the arteries and veins, an auto intoxication exists and apoplexy threatens, something must be done quickly in order that life may be saved In fact, these patients are often so well satisfied that they return and ask to have the operation repeated These are the very high blood pressure cases

I differ from most authorities regarding exercise in the treatment of these cases I am a firm believer in exercise The condition of the heart muscle, as Dr Barker has just said, is the key to the situation and the question arises, especially in cases of advanced arteriosclerosis, how we can improve the condition of the heart muscle and get it in good shape. I do not believe that we can improve the heart muscle by rest in bed Mackenzie and others tell us that the heart muscle fails in several ways If there is a failure in contractility, then the muscle should be given a rest, if there is a failure in its tonicity and general toxic condition, improvement follows on properly regulated exercise As a result of my experience with cardiac cases I believe that exercise is best for almost every heart case! I think that more patients die because of being kept in bed and quiet than from injudicious exercise The regulation of exercise is an art that is acquired by experience

It has been my practice for a number of years in attempting to get rid of the intoxication to give castor oil, a proteid diet and outdoor exercise The patients to whom I am referring are those that I have seen in private practice and not in my hospital work I always divide the cases into certain stages The first stage is the diet and castor oil stage As time goes on another stage is reached which I call the digitalis stage This is the stage of failing blood pressure, in which there is a tendency to a secondary low blood pressure and which means that the blood pressure which measures high is relatively low, 200 may be the proper blood pressure for some individuals who have carried 220 or even 250, but less than that is for them low pressure

Dr Edward E Cornwall, Brooklyn, N Y High blood pressure as a symptom does not ordinarily call for direct treatment, for it is mostly a conservative procedure The regular treatment of this symptom should consist, as far as possible, in the removal of the cause, and only exceptionally should symptomatic treatment by vasodilators be given The exceptional cases are those in which accidents to the cardiovascular apparatus are urgently threatened by the high blood pressure, and cases of coronary sclerosis with symptoms, the latter especially are benefited by nitroglycerin in sufficient doses In the great mass of cases of arteriosclerosis, toxemia and nephritis, arteriodilators do harm In these cases we have one means of reducing the blood pressure which is rational
and often exceedingly effective it is removal, as far as
possible or advisable, by ctive diet, of th
factor of putrefaction t which
prominently present in
pressure This is the
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capable of raising
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rise of blood pres

intravenous injection of a substance isolated by Beyer from putrid meat which has a chemical composition somewhat similar to that of epinephrin

Dr **M. Howard Fussell**, Philadelphia I protest against the remarks of Dr Bishop He says that cases of heart failure due to high blood pressure call for exercise and not for rest and I fear some of us will infer that he means that a patient with a failing heart from a high blood pressure should be placed at once on graduated exercise I have no doubt that we who treat so many of these cases are united in our opinion with regard to the care of these patients I do not doubt that Dr Bishop and I would treat any given case exactly alike I feel that the best thing to do first is to place these patients at rest, as a result of such rest there results promptly a fall in the blood pressure After a time there is instituted. and very necessarily, a graded exercise

Dr **Nathaniel Bowditch Potter**, New York Some years ago I found that patients with high blood pressure got better or worse according to what they were told of the figures, and I learned that too frequent blood pressure estimation, especially in private practice, depressed the patients, just as frequent urine examinations and the knowledge of the increase of albumin and casts

Dr. **Theodore C Janeway**, New York It seems to me quite probable, as Dr Barker has stated, that the underlying condition in many of these patients is disease of the small arteries Are there any others? I do not know The effect of treatment seems to make it clear that this entire group will be resolved into parts Two groups at least seem distinct, that consisting of patients who die with failing heart, and that consisting of patients who die of uremic manifestations Then again there is the patient with an intermittent high blood pressure. In some cases there is a return to the normal blood pressure and this may remain for years In these patients, anatomic lesions of the small arteries are unlikely

I should like to corroborate what Dr Barker and Dr Cornwall have said regarding limitations to the use of nitroglycerin and its applicability only in those cases in which sudden dangerous accidents occur In cases in which the coronary artery is threatened with complete obstruction, the good results may be from its local effects, opening up the paths that have been narrowed not from its lowering the general blood pressure One must not consider apoplexy in these patients due to rupture of a vessel by the high pressure From our autopsy experience we know that many who die of apoplexy, of hemiplegias, have thrombotic softening and not hemorrhage I am in accord with Dr Fussell as to Dr Bishop's remarks It should be remembered that there are many cases of severe myocardial insufficiency which require absolute rest When later we begin to order for those patients gradual exercise, it requires good judgment The use of the high frequency current has usually seemed to me a method of 'bleeding' the patient in the metaphorical sense I have seen patients just after treatment, whose pressures were said to be greatly reduced and my reading has been about what it was before There are probably occasional patients who are really benefited, and others in whom it acts as a psychotherapeutic measure If one lowers the blood pressure a considerable amount, as Dr Barker has said, the patient may develop anuria, failure of the capillary circulation through important organs and become seriously ill Not lowering the blood pressure but safeguarding the circulation, is the aim of treatment

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Importance of a Rectal Examination—Before you make a diagnosis in any form of rectal rouble it is absolutely essential that you should make a thorough examination of the part I note that very often through so called motives of delicacy—though what that means I confess I do not know—doctors tell us that patients refuse examination and that therefore the doctor has had to treat the case under very disadvantageous circumstances But if you will take my advice you will not treat any rectal disease unless you are permitted to make a thorough and complete examination—Harrison Cripps in *Clin Jour*

DUODENAL MEDICATION OF IPECAC IN THE TREATMENT OF AMEBIC DYSENTERY *

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In East India and other oriental countries, ipecac has been regarded for a century or more as the great remedy for dysentery In Europe and America, treatment by ipecac had fallen into disuse until quite recent times, on account, first, of its emetic action, second, of the deterioration and adulteration of the drug, and third, of improper methods of administration The revival within the past decade of the use of this drug as a remedy for dysentery was largely due to Patrick Manson, whose extensive experience in the tropics thoroughly convinced him that it was an efficient remedy

Besides Manson, a number of other authorities attest the value of ipecac Notably among these are Woodhull Major Rhoades, Simon, Dock, Freund, Barker and others Woodhull[1] refers to it as the one remedy which, if properly used, is as conspicuous in dysentery as quinin is in the malarial fevers, and urges medical officers to use large doses of it in all types of amebic dysentery He further adds that he has not known the treatment to fail Major Rhoades, U S Army, regards ipecacuanha and quinin as the sovereign remedies, the former by the mouth, the later by the rectum, and maintains that, if properly administered, the drug will give brilliant results in the majority of cases If properly administered, it is considered by S K Simon almost a specific for amebic dysentery He asserts that the amebas vanish almost at once

It may be interesting to note that our present attitude toward the ipecac treatment of dysentery is very much the same as it was 150 years ago The following quotation from the United States Dispensatory, 1854, will serve to illustrate

> John Helvetius, grandfather of the celebrated author of that name, having been associated with a merchant who had imported a large quantity of ipecacuanha, employed it as a secret remedy, and with so much success in dysentery and other bowel affections that general attention was attracted to it and the fortunate physician received from Louis XIV a large sum of money and public honors, on the sole condition that he should make the remedy public.

Sixty-five years ago the statement was made, in Watson's "Practice of Physic," that "subsequent to bleeding, the remedy from which the greatest benefit is derived is ipecacuanha " It has been repeatedly alleged that ipecac in small doses is a good prophylactic against liver abscess Indeed Calvert, professor of materia medica in the Calcutta Medical School, goes so far as to state that he believes ipecacuanha will cure hepatitis following dysentery, provided there is no suppuration In this connection it is interesting to note a statement made by Pilgrim,[2] superintendent of the Calcutta General Hospital

> In the past four years over 200 cases of dysentery have been treated and eighty two cases of hepatitis During the past three years since ipecac has been systematically employed not a single case of dysentery has been complicated by hepatitis while every case of hepatitis has recovered without suppurating The average number of operations for liver abscess has fallen from ten or twelve to three or four in the year

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* Read in the Symposium on Antiseptics and Germicides in the Sections on Pharmacology and Therapeutics and Preventive Medicine and Public Health of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June, 1912.

[1] Woodhull Therap Gaz., April 5 1902.

[2] Pilgrim Brit. Med. Jour 1910 ii, 2030

There is a diversity of opinion as to the proper method of administration, and yet, according to the experience of all who have employed ipecac, the proper method is insisted on Buchanan's[3] experience in Bengal has been very favorable in those cases in which he employed large doses Small doses, from 3 to 5 grains in pills, are utterly useless His directions are as follows [4]

> Castor oil should be given the night before, and, after the bowels have moved in the early morning, tincture of opium, followed in fifteen or twenty minutes by ipecacuanha in a dose of 25 or 30 grains The patient should lie undisturbed for four or five hours If vomiting occurs or if the stool has not much changed for the better within twenty four hours, ipecacuanha is to be repeated in half an hour

Woodhull employs a somewhat similar method, but uses counter-irritants over the epigastrium, such as iodin or mustard He says

> The stomach must be empty and the patient recumbent About twenty minutes before giving the ipecac, it would be well to paint the epigastrium with tincture of iodin, or apply a mild sinapism, though this may be omitted Ten or fifteen minims of tincture of opium may be given to be followed in ten or twelve minutes by 15 to 30 grains of ipecac Nothing should be given by the stomach for at least four hours and the recumbent posture should be strictly maintained If the first dose is rejected, it should be repeated after a short interval Ipecac controls capillary hemorrhage and before confirmed inflammation sets in, capillary leakage is the feature of dysentery, hence its favorable effects in this disease

Major Rhoades' method of treatment is as follows [5]

> The patient, having received his preliminary purge and all food and water having been proscribed for six hours, is given a hypodermic injection of morphin sulphate, ¼ grain (0 016 gm) to prevent vomiting At the same time an ice bag filled with finely cracked ice and protected with two thicknesses of gauze is placed over the pit of the stomach and another over the anterior surface of the neck The patient is directed to lie flat on his back, a third ice bag being substituted for a pillow and placed under the nape of the neck The patient is cautioned not to speak or move for four hours One-half hour after the morphin injection, the ipecacuanha is administered in eight to twelve pills of 5 grains each The patient is encouraged to resist by mental effort the desire to vomit and to try to sleep When the saliva begins to flow freely, he should be cautioned not to swallow it. Unless this is done, vomiting will almost certainly occur If vomiting does occur within an hour after administering the dose, it should be repeated when the stomach has become quieted After six hours a small glassful of iced ginger ale or a cup of tea is given, followed by frequent feedings of beef tea and albumin water late into the night The following morning, the dose of ipecacuanha is repeated and again on succeeding days until copious, pultaceous, brownish yellow stools appear and rapid amelioration of acute symptoms gives evidence that healing had set in This being the case, the dosage of the ipecacuanha is reduced to a 5 grain pill or capsule three times daily, and continued for about a week longer, the diet is increased, and at the same time lavage of the colon is begun

Patrick Manson[6] has still another means of administration

> The patient must abstain from food and drink for at least three hours Twenty drops of laudanum are then given, and a mustard poultice applied to the epigastrium About twenty minutes later, 20 to 30 grains of powdered ipecacuanha root, either in bolus or in a small quantity of water are administered The patient must then lie flat on his back without a pillow, and endeavor to avoid vomiting, he may neither eat, drink, speak nor move for three or four hours If vomiting occurs soon after the powder is given, in an hour or two a second dose may be administered After three or four hours, small quantities of food may be given during the succeeding six or eight hours, when the drug is to be repeated Guided by its effects, the use of ipecacuanha is kept up for two or three days A great drawback to this treatment is the severe vomiting which sometimes ensues, but, notwithstanding this drawback there can be no question of its value in some cases, although in others it appears to do little or no good If the ipecacuanha produces a large loose, bright yellow stool, improvement is nearly sure to follow

The action of ipecac on the ameba has not been definitely determined Vedder, U S Army, made some bacteriologic experiments[7] and showed that the *Bacillus dysenteriæ* was inhibited by a 2 per cent fluid extract of ipecac While the amebas in a 5 per cent bouillon culture were at all times killed by a fluid extract of ipecac in a dilution of 1/50,000, sometimes they were killed by a higher dilution of 1/200,000 Two varieties of amebas were used, but not *Entamœba coli* or *Entamœba dysenteriæ* He insists that ipecac containing the proper amount of emetin should be used and condemns its use in cases of the bacillary form of dysentery Dr H A Freund made some experiments with ipecac on the live amebas from the stools in the warm stage He concluded that it had a direct destructive action on the amebas and besides this effect it acts apparently as a cholagogue and sometimes as a purgative Under the treatment the ameboid motion of the parasites ceases in a few hours and disappears completely in two or three days

From this cursory review of the literature one is forcibly impressed with the fact that ipecac has a definite action on the amebas, and, if properly administered, is undoubtedly the best remedy at our command What is generally conceded, however, to be the proper method of administration proves such a formidable procedure that the treatment is wholly impracticable

In an attempt to overcome the many objectionable features of the methods in vogue, a simple, rational and more practical method has suggested itself to me, in the use of the Einhorn duodenal tube This tube was designed for duodenal aspiration and alimentation and it will be found an ideal instrument for the treatment of dysentery with ipecac For a complete description of the duodenal tube and the method of its introduction the reader is referred to the original article by Max Einhorn [8] As a rule patients have little difficulty in swallowing the tube and comparatively little discomfort afterward An examination of the stomach contents, to determine the presence of free hydrochloric acid, will help determine whether the tube has passed through the pylorus, which is done by aspirating a little of the fluid and testing with congo paper After each aspiration the tube is washed out with a little water and clamped When it has entered the duodenum, the aspiration is slower and more difficult and the fluid is alkaline and bile-stained Einhorn also recommends a milk test The patient is given a few swallows of milk and the stomach is then aspirated If milk is absent, the capsule is in the duodenum The time required for the capsule to pass into the duodenum varies from one to five or more hours

Ipecac is especially indicated in acute cases and in the exacerbations of the chronic forms It is said by some clinicians to have practically no effect in cases in which the symptoms are due to a mixed infection

In spite of the fact that all [illegible] were extremely chronic and refractory, [illegible] ng complicated with liver abscesses, the results were fairly striking, but the cases are reported more for the purpose of emphasizing the method than the results of treatment Powdered ipecac was employed either suspended in mucilage of acacia or macerated in plain warm water A 2-ounce metallic syringe was used to instil the remedy which represented from 1 to 2 drams of ipecac to the dose in a 6-ounce mixture Unquestionably much of the success of treatment depended on the quality of the drug Those cases which required more than three or four doses and in which the amebas reappeared in the stools were treated by a drug of an inferior quality On the other hand, the cases treated with a physiologically tested powder yielded after the first or second dose

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[3] Buchanan Practitioner December 1897

[4] Sajous Annual III 45

[5] Modern Treatment p 140

[6] Manson In Gibson's Practice of Medicine 1901

[7] Vedder Bull Manila

[8] Einhorn, Max Med

CASE REPORTS

Case 1—*Patient*—J S, male, aged 64, janitor, ten years ago suffered from a liver abscess attributed to a wagon running over his abdomen He recovered from the operation, but never enjoyed good health Before the accident he suffered from mild attacks of dysentery and a few years after had an acute attack with bloody mucus in the stools and much tenesmus lasting several months No history could be obtained of the discovery of amebas in the stools or liver abscess

Examination—The patient showed marked pallor and emaciation and suffered from a moderately advanced pulmonary tuberculosis The abdomen was somewhat distended and coursed with large superficial veins There was an area of considerable resistance over the upper right rectus and tenderness along the border of the eighth and ninth ribs on the right side Owing to this tenderness, the liver could not be palpated He had a leukocytosis of 21,000 For several months he had a number of dysenteric stools each day which contained pus, blood and mucus A large number of active *Amœbæ coli* and yeast cells were found on examination of the stools

Treatment and Course—Patient was admitted to the Mercy Hospital Dec 12, 1910, was ordered a semisolid diet and salines followed by the administration of ipecac After the introduction of the tube the first dose (1½ drams) suspended in mucilage of acacia was administered No other discomfort than slight nausea ensued Examination the next day showed amebas in the stool, but these disappeared after an ipecac enema (ʒiv—Oi) Several days later the ipecac enema was repeated with the results negative for amebas Two weeks later ¼ dram of ipecac was administered duodenally followed by vomiting without expelling ipecac The following day a dram was administered, the results remaining negative for amebas The stools were examined at intervals of one or two weeks after the patient left the hospital and no amebas were found for six months, when a few, slightly motile appeared in the stools which averaged from two or three semisolid ones a day A month later, when amebas were again found 1¼ drams of ipecac was administered duodenally in my office No vomiting occurred The next day the patient had six or eight diarrheic stools, since then the stools have been better formed, there has been less abdominal tenderness and no amebas The patient was readmitted into the hospital in December, 1911, with alcoholic pneumonia, from which he died Previous to this illness, the stools were formed and free from amebas The pneumonia was associated with severe diarrhea, but careful examination of the stools failed to find amebas

Case 2—*Patient*—G S F, male, aged 32, soldier (referred by Dr F J Snyder, York, Pa), was admitted to Mercy Hospital March 28 1911 He contracted amebic dysentery while serving as a soldier in the Philippine Islands The disease began as a simple diarrhea, the number of stools varying from six to twelve daily After three months the stools were mixed with blood and pus and associated with great tenesmus At this time he was treated with ipecac and quinin according to the method of Major Rhodes In spite of the ice-bag applied to the back of the head and the spine, the mustard plaster to the epigastrium, the opiate internally and enforced quietude for hours before and after the administration of ipecac, the patient vomited after each dose Some improvement was noted after the treatment, but the symptoms soon returned From this time until 1907 he had been able to do light work, but since then became totally incapacitated

Examination—On admission to the hospital he presented an emaciated and anemic appearance with dull expression and sunken eyes The cervical and inguinal glands were slightly enlarged The abdomen was somewhat flattened and retracted, the recti muscles were tense and rigid and there was a marked tenderness over the whole abdomen There was no apparent enlargement of the liver or spleen The patient had a leukocytosis of 12,500 The stools averaged eight to ten daily, watery or semisolid in character, and contained mucus, pus and blood Active amebas were found in large numbers, as many as ten and twelve to the field

Treatment and Course—Patient was put to bed and on liquid diet Several high saline enemas were given Stomach contents showed free hydrochloric acid March 31, the duodenal tube was introduced at noon, a glass of milk and slice of bread were given at the same time

At 4 30 p m aspirated fluid was alkaline and bile tinged, then 1½ drams of ipecac in water were administered Slight nausea followed but no vomiting At 6 30 p m a second dose of 1¼ drams was given which caused some nausea and vomiting of mucus but no ipecac

Two days later the stools were well formed, passed without tenesmus and were free from blood and amebas A high enema consisting of ½ ounce of powdered ipecac with 10 minims of laudanum in a pint of water was given and retained for fifteen minutes This was repeated the next day On April 4, the fifth day of treatment, 1¼ drams of ipecac were administered duodenally and retained This was followed next day by another ipecac enema, which completed the treatment

The amebas disappeared from the stools after the first duodenal medication and colonic irrigation with ipecac The patient was in the hospital ten days A period of fourteen months has elapsed without treatment during which he has averaged one well formed stool each day, has gained in weight and strength and worked steadily Repeated examinations of stools have been negative for amebas

Case 3—*Patient*—W K, male, aged 35, soldier (treated through courtesy of Dr Craighill), was admitted to the University Hospital April 25, 1911 Patient had contracted amebic dysentery in 1907, while serving in the Philippines Symptoms were very acute from the beginning, averaging from thirty to forty stools a day, each containing blood and mucus He lost about 50 pounds during the first month of illness For the first two years following the attack he averaged from fifteen to twenty stools a day and more recently from seven to eight Early in the attack, yellowish brown pigmentation of the skin developed There was no nausea or vomiting but much pain and soreness in the abdomen Shortly before admission to the hospital he developed a cough and night sweats

Examination—The patient was extremely septic He was *emaciated, cachectic and slightly* jaundiced, with puffiness under the eyes The liver was enlarged and painful on pressure but there was no fluctuation The stools were thin, watery, yellow in color and contained mucus, blood and *Amœbæ coli* Numerous leukocyte counts showed a fluctuating leukocytosis from 8,000 to 11,200 The hemoglobin was 40 per cent Gastric analysis revealed the presence of hydrochloric acid with a total acidity of 26

Treatment and Course—April 30, 1911, at 8 30 a. m, the patient swallowed the duodenal tube without difficulty At 11 30 a m a dram of ipecac was administered The tube was left *in situ*, but the patient vomited some mucus containing a little ipecac about half an hour later, which caused the tube to be partly expelled One *fourth grain of morphin* was given hypodermically and at 4 30 p m a second dram of ipecac was given This was also followed by vomiting of *mucus and a little* ipecac A slight depression followed as an effect of the drug The following day an enema contain ing 2 drams of ipecac with 20 minims of laudanum in a pint of water was given This was repeated the next day, and the following day at 3 30 p m a dram of ipecac was administered duodenally followed in a few hours by another dram, which caused nausea and vomiting Another ipecac enema was given the next day when, owing to the condition of the patient, it was considered inadvisable to continue treatment

CASE 4 —*Patient* —G L, male, aged 62, soldier, contracted dysentery while serving in the army at Fortress Monroe in 1888 The disease persisted with great severity until 1893, after which the symptoms abated and the disease ran a milder course until 1901 During this year two liver abscesses developed, both of which were relieved by operation The following year an acute exacerbation occurred which was temporarily relieved by quinin irrigation Since then he had suffered more or less continuously until his admission to the hospital Sept. 6, 1911

Examination —The patient was sallow, cachectic and much emaciated He had marked abdominal tenderness but no enlargement of the liver He averaged twelve loose movements a day The stools were either liquid or semisolid, composed largely of pus, blood and mucus with numerous motile *Amœbæ coli*

Treatment and Course —Two days after his admission 2 drams of ipecac were administered through the duodenal tube in doses of 1 dram each, one hour apart No noticeable effects resulted from the first dose but after the second the patient complained of nausea which was followed in an hour by a chill and vomiting of mucus Two days later and after the third dose of ipecac the stools were examined but no amebas were found The third and fourth doses were followed by some discomfort and, in one instance a small quantity of clear fluid was vomited but no ipecac After the fourth administration a saline and an ipecac enema was given The stools remained watery but free from amebas and gradually decreased in number After the sixth administration of ipecac the treatment was discontinued The dysenteric symptoms persisted for several weeks without the appearance of amebas in the stools The stools then became well formed and have averaged one per day up to the time of his last report, eight months after treatment During this time no amebas have appeared in the stools and his health, twenty four years after contracting the disease, has been restored

CASE 5 —*Patient* —F C H female, aged 34, (referred by Dr Buxton) had good health until 1906, when dysentery set in, which persisted for five years During this time she averaged from ten to twelve dysenteric stools daily, usually accompanied with tenesmus Then followed a period of eight months during which she enjoyed fairly good health and averaged one well formed stool per day Four months before admission to Mercy Hospital the dysentery returned averaging four to five stools daily each containing blood and mucus and associated with abdominal pain and tenesmus

Examination —With the onset of this attack an abscess of the liver developed which ruptured into the lungs Since then the patient had had profuse anchovy sauce expectoration, averaging from half to one pint a day Repeated examinations failed to show the presence of amebas Tenderness was quite marked over the sigmoid On admission the temperature was 101 Blood showed an absolute leukocyte count of 17 900 Stools were thin and watery containing blood streaked mucus, many actively motile amebas and large numbers of *Cercomonas intestinalis*

Treatment and Course —On December 4, 1 dram of ipecac was administered without causing nausea, vomiting or other discomfort Three stools were voided the following day unattended by pain Amebas were found which were sluggishly motile No stool for the next forty hours The second dose of 1½ drams of ipecac, given December 7, caused slight nausea The following day the stool was fairly well formed and one motile ameba and numerous cercomonads were found The general condition of the patient showed improvement increased appetite, lowered pulse and temperature almost normal Stool examined December 10 was free from amebas and cercomonads

December 12, 2 drams of ipecac were administered This gave rise to considerable nausea and general abdominal pains which lasted about three hours Repeated examinations of stools for three weeks following showed an absence of amebas and cercomonads At the end of this time both amebas and cercomonads appeared in large numbers, but disappeared promptly after several ipecac enemas 2 drams to the pint

Patient was discharged with normal temperature and almost complete cessation of expectoration Stools were normal averaging one in twenty four hours The accompanying table shows the effect of treatment on the blood with special reference to leukocytes and differential counts

EFFECT OF IPECAC TREATMENT ON THE BLOOD WITH SPECIAL REFERENCE TO LEUKOCYTES AND DIFFERENTIAL COUNT IN A CASE OF AMEBIC DYSENTERY (CASE 5)

Date	Red Count	Hemoglobin Per Cent.	White Count	Polynuc	Large Monos	Small Monos	Eosin	Remarks
11/27				84	6	10	0	
11/28				84	10	6	0	
12/1	3 024 000	43	17 900	78	9	13	0	
12/4								Ipecac 1 dr
12/7								
12/5				84	4	12	0	
12/6			12 500	85	5	10	0	
12/8			25 000	81	4	15	0	Ipecac 1½ drs
12/9			17 500	75	5	20	0	
12/11			16 000	76	3	21	0	
12/12	3 510 000			75	4	20	0	Ipecac 2 drs.
12/20			11 500	79	7	13	1	

CASE 6 —*Patient* —J P L, male, aged 30, traveling salesman (referred by Dr Bunting), contracted dysentery in 1906, while in New Orleans The symptoms came on abruptly as an acute attack with profuse dark watery stools The patient was treated in the hospital for seventeen days when the symptoms abated Since then he has suffered with frequent exacerbations increasing in severity until his admission to Mercy Hospital Dec 27 1911 For a year he had averaged daily from three to eight watery or semisolid stools, containing blood and mucus associated with marked tenesmus He had been treated with salol coated pills of ipecac in 1910 beginning with 50 grains a day the dose being reduced 5 grains daily for two weeks It was impossible to retain all of the ipecac as it caused vomiting and some of the pills were found in the stools undissolved Notwithstanding this fact the symptoms were temporarily relieved In June 1911 he was again treated with ipecac in keratin coated pills 30 grains a day, in addition to opium bismuth and tannic acid irrigation The ipecac was vomited either in the form of pills with the coating dissolved or disintegrated into a powder The symptoms were relieved for three or four weeks

Examination —Patient appeared slightly anemic, the lymph nodes of the neck and groin were enlarged and the abdominal wall was soft and relaxed with no rigidity or tenderness on pressure The liver and spleen were normal C [illegible] mission the stools were soft semisolid a [illegible] pus cells, active amebas and *T* [illegible]

Treatment and Course —After [illegible] gradually became thicker and [illegible] tion of the ipecac was followed by little or no discomfort and a gradual diminution of amebas and trichomonads Proctoscopic examination showed several healing ulcers in the rectum In this case treatment was discontinued for a while after three administrations of ipecac, but was resumed on return of symptoms, the results proving more successful The patient left the hospital two weeks after his readmission in fairly good health At his last report, he had continued to improve in general health, gaining strength and weight with no return of dysenteric symptoms, averaging one normal stool a day with no amebas

Case 7—*Patient*—F E H, male, aged 39, soldier, barber, (referred by Dr Rosenthal) had unimportant family and previous history Present condition began in 1900 while in the Philippines The first attack lasted eighteen days, stools averaged about six per day and contained blood and mucus The second attack occurred four months later Since then the patient has suffered with periodical exacerbations and had never enjoyed good health For the past two years his health was very much impaired He suffered with abdominal pains, two to six stools a day, frequent chills, fevers and sweats

Examination—Patient entered Mercy Hospital Jan 29, 1912 He was undernourished and anemic. He had marked flattening and relative immobility of lower part of right chest, probably due to an old pleurisy No râles were heard There was tenderness over the sigmoid, the liver was slightly enlarged and painful on deep pressure The lymph nodes were enlarged Leukocyte count was 13,150 Stools were watery, semisolid and contained blood and mucus with numerous amebas

Treatment and Course—He was given six doses of ipecac, 1 dram each, through the tube at intervals of three or four days, which caused some nausea and several attacks of reflex vomiting, but no ipecac was expelled The stools which after the first examination were loose and watery gradually became well formed No amebas were found after the first administration For ten days prior to his discharge from the hospital February 24, he averaged one normal movement daily Proctoscopic examination made during the course of treatment showed rapid healing of several ulcers located in the rectum Since leaving the hospital he has averaged one well formed stool a day with no further dysenteric symptoms Examination May 8, 1912, showed stools free from amebas

It appears from a study of these few cases that the ipecac treatment by duodenal administration is distinctly more efficacious than by other methods Many other forms of treatment had been employed without avail The fact that this series of most intractable cases were either permanently cured or relieved for a considerable period of time bespeaks efficiency of the method

Large duodenal doses of ipecac seem to have no injurious effects There are occasionally gastro-intestinal symptoms such as nausea, less frequently, vomiting and, rarely, diarrhea lasting from twenty to forty-eight hours Slight general depression may appear with a tendency to lowering of blood-pressure which rarely amounts to more than 10 mm even with doses as large as 2 drams The effect on the leukocyte count, as shown by the accompanying table, is a fair illustration of what occurred in most all of the cases

In conclusion I desire to acknowledge the valuable services rendered by Drs Charles E Simon and A W Skilton who examined the stools of my patients and Drs S H Hutchinson and J N O Connor for their clinical assistance in the study of the cases

20 East Preston Street

Harmful Dusts—Another curious effect of dust has been observed in a form of temporary deafness among the workers in jute, from which twine and bags are made The fine dust of the jute fiber, mingled with the natural 'wax" of the ears, packs *into hard cakes against the tympanum*—W G Thompson in *Jour Maine Med Assn*

RECENT HYGIENIC IMPROVEMENTS IN DAIRYING*

RICHARD COLE NEWTON, M.D
Consulting Physician to the Mountainside Hospital Montclair N J., Member N J State Board of Health
MONTCLAIR, N J

The production of clean milk has engaged the attention of business men for only about a score of years, and while all recognize the necessity of great reforms in the production and handling of this substance, the means of accomplishing this desideratum on a large scale have hitherto seemed practically impossible, except at a cost to the consumer which has proved excessive to all but the well-to-do So many factors have had to be taken into account in the solution of this problem, that some of them up to this time either have been overlooked or have proved insurmountable The main factor has only recently begun to receive its due weight in sizing up the situation, and this factor is, as will be shown later on, the dairyman himself—not the man who sells the milk, but the man who produces it and packs it off to market

High-grade milk has for some years been brought to market from a relatively few high-grade and expensive dairies Some of this is called "certified" milk, and is produced under the most favorable possible conditions, and is sold for from 15 to 22 cents a quart, which, of course, is a high price for a poor man to pay So steps must be taken to produce a clean, safe milk which a poor man can afford to buy Of all the milk brought to market, not over 5 per cent can be "certified" while something must be done to make the remaining 95 per cent at least safe for the millions of poor babies whose main, or sole, food-supply is cow's milk

Years ago a friend of mine started a dairy farm in which he employed many new and expensive devices to render the milk as nearly perfect as milk can be made He employed maids, dressed like trained nurses, in clean starched caps and immaculate wash dresses, to do the milking, because he rightly maintained that women are gentler, neater and more dexterous at such work as milking than men, and that inasmuch as the moral treatment of the cow has an enormously important effect on the quality and wholesomeness of her milk, women, with their gentler and neater ways and more correct personal habits, are much better fitted than men of the same walk in life to milk cows and take care of the milk

He also invented a covered pail with a small opening in the cover and a diaphragm consisting of a cloth stretched over the opening, to be milked through Everybody was astonished at the great amount of dirt which collected on this sterilized cloth with each milking, no matter how many precautions had been taken in washing the milker's hands and the cow's flanks and teats Great progress was made in producing clean milk and the new barns, with their fancy fittings and concrete floors and bright airy stalls, were so crowded that some of the cows had to be kept and milked in one or two old dusty, ramshackle barns To the surprise of everybody concerned, the milk drawn in the old dusty barns was found to be nearly as clean and free from bacteria as that milked in the new up-to-date barns

You may ask how it was known so promptly that the milk from the old barns was so nearly equal to that produced in the new barns It was simply because the milk from every barn on the farm was carefully examined every day under the microscope and the bacteria counted This similarity in the milks produced under such diverse conditions was evidently due to the covered pail[1]

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* Read in the Section on Preventive Medicine and Public Health of the American Medical Association at the Sixty Third Annual Session held at Atlantic City, June 1912.

The fact that clean milk could by any means be produced in a dirty barn was a great discovery and bound to bring about radical changes in the entire dairy business Like many of the most important discoveries and inventions in the world, it came about largely through an accident Yet it is none the less valuable for all that, inasmuch as it bids fair to prove an inestimable boon to suffering humanity

The dairy farm of which I have just spoken failed financially, partly because it was started some years ago, before the public was so wide awake as it is now to the question of clean milk, and partly because the whole process of producing clean milk was then much more of an experiment than it is now

The man who started the dairy sold his interest in it after some years of struggle to make the public appreciate what he was offering them He made no money by his venture, but he came out of it with the idea firmly impressed on his mind that clean milk for the multitude can be produced and sold at a price within the reach of any man of moderate means, always provided that the farmer can be induced to cooperate with the milk company or the wholesaler who puts the milk on the market

I went with my scientific friend a number of times to a filthy and badly kept dairy and spent some hours of valuable time trying to impress on the dairyman how easy it would be to produce clean milk by a few simple precautions Patiently and carefully the doctor (for the scientific dairyman was primarily a doctor and a hygienist) would state and restate the steps to be taken and his listener would promise in a half-hearted way to carry out the directions, but would invariably wind up the discussion by asserting that he ought to get at least a half cent more a quart for his milk And so far as the farmer is concerned, this is the crux of the whole matter If he is to produce cleaner and better milk, he must have some reward for his extra pains and trouble and the higher degree of intelligence which he puts into his business The philanthropic attitude of those great milk companies which undertake to produce better and safer milk for the suffering and helpless babies of the tenements, and to pocket all of the advanced price themselves has not seemed to appeal to the farmer The farmer has had a hard enough time to make both ends meet without spending more money in producing wholesome milk than he can get for it As one of them has expressed himself, he feels sorry for the poor sick babies in New York City, but the babies he is most interested in and is bound to take care of are his own babies Consequently, if he should send better milk to market, he should demand a better price for it

One of the great milk companies has had a long and expensive litigation because the farmers from whom they purchased the milk which the company sold would not consent to have their herds tuberculin-tested The idea of offering any more money to the farmers for their extra expense and trouble in getting their herds tuberculin-tested never seems to have occurred to this company Now that the suit has gone against it, however, the company seems to have been able to make some arrangement with the farmers, inasmuch as it announces that it is prepared to furnish tuberculin-tested milk at 10 cents a quart to anyone who wants it

Now, in spite of every precaution that may be observed in drawing, handling and transporting milk, there is no absolute guarantee that it may not become contaminated with germs pathogenic to man

The epidemic of tonsillitis and influenza which prevailed in and about Boston last spring and summer and claimed many victims, of whom a considerable proportion died, was, after a careful and impartial investigation, traced to the milk from one of the best and most scientifically conducted dairies in the world It was also found that the contamination of the milk was not due to any fault or carelessness on the part of any employee or agent of that dairy So far as one can judge from a review of the testimony of the impartial and painstaking scientists who conducted the investigation, such a contamination of the milk of any dairy cannot be prevented by any means known to science, unless the milk shall be properly pasteurized or sterilized This episode in the history of scientific dairying has been dwelt on in this paper because it occurred so recently and was so thoroughly investigated Other similar occurrences have been reported from time to time in this country and abroad Some years ago I was interested in a study of the spread of a mild form of diphtheria by the milk of one of the best dairies anywhere, which is the pioneer "certified milk" dairy in America The investigation seemed to prove without question that the diphtheria was spread by the milk of this dairy, although every known precaution (except pasteurization) had been observed in preparing the milk for market

Mr Nathan Straus and many others, including the scientific man of whom I have been writing, agree with Professor Sedgwick and the other investigators of the Boston epidemic in asserting that milk cannot be guaranteed to be free from pathogenic germs (including those of tuberculosis) unless it has been pasteurized

Some physicians hold that pasteurized milk has lost some of its most valuable nutritive qualities, so that its constant use may produce rickety babies, and furthermore, that pasteurization may be a bad thing because by covering up nastiness in the milk, it will encourage lax and dirty methods in producing and transporting milk While it must be admitted that there is a certain amount of truth in these objections to pasteurization, those who favor the universal pasteurization of milk have, so far at least the better of the argument

While the matter was being discussed the other day our dairy doctor pointed to his own child, a ruddy and round little girl of 4, and said, "Do you see anything rickety about that child? She has never had any milk since she was weaned that has not been pasteurized and she has had very little other food of any kind And so far as the objection goes that pasteurization may be a cover for careless or dirty dairying no good dairyman will allow his milk to be dirty and trust to subsequent heating to conceal that dirt Even if he were disposed to do this the methods adopted by the milk company of which I am writ ich be presently described will effectua 1
fraud on the milk consumers
mind that milk must be past
guaranteed, the question how t

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[1] The pail now in use does not have a cloth diaphragm as it has been found that a hood of metal over the small hole in the cover of the pail so arranged that the milker must direct the streams of milk from the cow s teats horizontally instead of perpendicularly answers practically every purpose In other words the contamination of the milk is caused by the dust which falls into the pail from the cow s sides the milker s hands and clothes and the dust that is always circulating in the air especially of a stable

and economically done immediately confronted our dairy expert. He had heard that brewers pasteurize their beer at the breweries, after it has been bottled, and immediately proceeded to investigate the process to find out, if possible, whether it could be used to advantage in pasteurizing milk. As a result of his study, he has installed one or more pasteurizers, similar to those used by the brewers, in which all the milk from his creamery is pasteurized after it has been bottled and a metal cap has been clamped on the bottle, just as the cap is clamped on the bottle of beer. This cap, with the date of the pasteurization plainly stamped on it, is not to be removed until the milk is used for food, so it cannot be contaminated or sophisticated in any way between the creamery and the consumer's table.

Now I have briefly outlined the fundamental principles on which clean and cooperative dairying can be carried on and milk produced and sold at a profit at 9 or 10 cents a quart.

Of these fundamentals, the most important one, however, has only been hinted at. It is necessary, therefore, to enlarge on it somewhat more fully.

It was said above that the main factor in the production of safe and wholesome milk at a moderate price is the dairyman. I have spoken of the injustice and futility of expecting the farmer to produce a higher-grade milk at an increased cost and not allowing him to participate in the increased profit accruing from its sale. Yet no one appreciated, until the experiment was actually tried, how potent a factor this same farmer is in the production of milk of a satisfactory quality. When our dairy doctor got his creamery started, he refused to accept milk having a bacterial content of over 10,000 per cubic centimeter, and all his farmers brought him milk just below that count, but never much below it. After thinking this over for a while, the bacteriologist in the company's employ spoke to one of the farmers about it and was surprised at the reply that there was no object in bringing cleaner milk, so long as the milk they were bringing would be accepted. Then the creamery adopted another device. It offered $40 a month in prizes, $25 first prize, $10 second prize and $5 third prize, to the farmers bringing the milk that had the smallest bacterial content during the month. A great rivalry at once arose among the milk-producers, and men whose milk had never shown a bacterial content below eight or nine thousand immediately began bringing milk having only a few hundred bacteria per cubic centimeter. The farmer was not told that he must wash his hands carefully between each milking and carefully wash the cow's flanks and udder and sprinkle the stable floor with water before milking, but under the stimulus of the prize and the chance of surpassing his colleagues, he "got busy" and found out all these things for himself and put them into practice, and again the results have been most expectedly satisfactory to all concerned.

These farmers were not ordered to have their cattle tuberculin-tested; they were paid to do it. They were given one-half a cent a quart more for their milk if it was brought from tuberculin-tested cattle. They were also given one-quarter of a cent a quart if their bacterial content was less than 10,000 per cubic centimeter. They were also given 4 cents a can (1/10 of a cent a quart) for every "point" above 3.5 per cent. of butter fat (a point being 0.1 per cent.) and they agreed to pay a penalty of 1/10 of a cent a quart for every "point" below 3.5 per cent. of butter fat in the milk delivered at the creamery.

Now we have a nearly complete cooperative scheme in which the farmers and the creamery are equally interested. The creamery, of course, belongs to the company and all the pails and cans used in holding and transporting the milk are sterilized at the creamery. The farmers get their sterile utensils at the creamery every day and bring them back the next morning filled with milk, leaving them there and taking others away with them for use that night and the next morning.

The bacteriologist is employed by the company and every day he examines every farmer's milk and posts the results on a bulletin board where everyone can see them, so that the farmers all know exactly where they stand and where their competitors stand every day of the month, and who is likely to get the prizes; and if a man fails to keep up his record, he and his neighbors immediately know it and generally can find the reason. The practical benefits of this daily supervision of the milk were strikingly shown not long ago. A farmer one day brought in some milk that showed a greatly increased number of bacteria above his average count. When this was pointed out to him he had no idea of the cause. The bacteriologist, according to his custom, hastened to the farm and inspected the herd. He found three cases of garget, an infectious disease of the cow's udder, which is supposed to convey scarlet fever to human beings who may drink the milk of the affected animal. These three sick cows were immediately isolated and a possible infection of the whole herd was prevented, as well as a possible epidemic of sickness among the consumers of the milk. It is easy to imagine that many human lives might have been saved had this custom of daily bacteriologic examinations of all the milk from every dairy been carried out in the past. It is so useful, so simple, and so practicable, that it does not seem unfair to predict that the dairy laws will eventually enforce this precaution in all creameries and public milk stations.

On another occasion a farmer brought to the dairy some milk showing an extraordinarily large bacterial content. At first he stoutly denied any known cause for this, but, on being cross-questioned, acknowledged that he had bought some milk from a neighbor and turned it in as his own. So an attempted fraud was discovered and frustrated.

Now we see some of the benefits to which cooperation in the dairy business and milk business leads:

1. A comparatively high and safe grade of milk produced at a price within the reach of practically all users of milk.

2. A contented and intelligent body of farmers producing this milk and getting a tangible reward for their improved methods. As they are now beginning to see the advantages of cleanliness they are beginning to practice it assiduously and to believe in it. Instead of looking on health and sanitary regulations as an imposition and a hardship, they are cheerfully carrying them out and are taking pride in their work, and they are also reaping a pecuniary reward, as it is just and proper that they should. This cooperative dairying has opened a new vista before the farmer and has instituted in his business methods and ways of thought an improvement that promises great things for the future. The dairyman has had a hard time for many years, and the result has been the poorest milk that he could get the milk companies to accept, with the consequent large infantile sickness and mortality in all our cities.

The attempt to make him produce high-grade milk by passing ordinances has proved as futile as the long continued attempt, so popular in this country, to make people moral and abstemious by law Education, an appeal to the farmer s self-respect and an assurance that he will be a participant in the increased remuneration for furnishing milk that is safe for a baby to drink, will inevitably work out a revolution in the milk industry

Our dairy doctor is an unquestioned philanthropist and his efforts will tend to raise the whole milk-producing business from its present low and unsatisfactory state into a profitable and respectable — I might almost say, a scientific — calling that may well engage the entire time and thought of any well educated and refined young man or woman

42 Church Street

ABSTRACT OF DISCUSSION

Dr Arthur R Reynolds, Chicago It has been pretty well demonstrated that farms can produce any kind of milk that is wanted, if they are paid for it as they should be

With all the papers, ordinances and things that are read and passed, very little has ever been said about the age of milk It is well known that milk has germicidal properties up to the time that it is about 6 hours old, and also that cows are milked every twelve hours A great many people in the country and smaller places can get their milk every twelve hours, every city should get some of their milk every twelve hours

Dr Malcolm C Rose, New York It was not quite clear what kind of cover or fastener Dr Newton suggested to hold the cheesecloth in place Many farmers would like to know of such a simple device to produce clean milk, rather than go into all the detail required for qualification for the certified class

Dr J Joseph Kindred, Astoria, N Y There is an important relationship between what Dr Newton has said as to the price of milk which the farmer gets and the price which the consumer has to pay And this brings out the point that there is no economic, basic foundation for the fact that the poor consumer and the starving parents of sick babies have to pay the price that they are now compelled to pay In other words, there is no relationship between the law of supply and demand, and even if the farmer is able to sell his milk at a fair profit, the consumer ultimately has to pay an outrageous profit, and we understand, of course, the reason for it, it brings up the very broad proposition of the regulation of the trusts

Dr Joseph Goldberger, Washington, D C I think we all agree that we want primarily a pure milk, and we all will agree that there is a possibility of obtaining it but the difficulty in practical life is to keep it pure during its transit from the cow's udder to the mouth of the consumer Now, while this may theoretically also be possible, as a matter of practical fact it is only too frequently not attainable, and therefore we must try to take such measure or measures as will insure a supply of milk safe in the sense of being free from disease producing organisms

There can be no question but that pasteurization does make milk safe Some of the objections to pasteurization to which Dr Newton referred undoubtedly are valid but as he also well pointed out, when weighed against the points in favor of making the milk safe to the consumer, they must fall out of practical consideration To emphasize, therefore, I simply want to say that we must pasteurize our milk at least in large cities, to increase the chances of the consumer getting a safe, disease free milk Speaking for myself I have not, in my own family, altogether confided in that I am speaking now of commercial pasteurization I do not entirely trust milk even after it has been commercially pasteurized. In my own family I invariably use boiled milk and I am bringing up two vigorous youngsters in that way They have never had any milk (except their mother s for a short period in infancy) that was not boiled, and I do not believe that boiled milk has hurt them in the least

Dr J J Kindred, Astoria, N Y May I ask Dr Goldberger if it is possible to sterilize the whole quantity of milk consumed in the city?

Dr. M. P Ravenel, Madison, Wis I would like to combat the wide spread idea that pasteurization destroys the nutritive value of the milk and produces scurvy and malnutrition in children Pasteurization must always be a temporary measure and should not be advocated to take the place of clean milk from healthy cows It seems to me that one can liken the case to the choice between a pure mountain spring and filtered water from a cesspool, theoretically, the filtered cesspool makes a safe drinking water but people do not want it and it is better to take a water which is pure at its source In the same way it is better to have pure certified milk than pasteurized Nevertheless, pasteurization is a great safeguard and should be adopted where an absolutely clean supply can not be obtained The charge that pasteurized milk produces scurvy has been answered repeatedly I once heard Dr Isaac A Abt, in reply to such an accusation, say that he had seen children with scurvy who fed at the mother's breast, which is unquestionably true I wish to emphasize the value of pasteurization as a measure for the protection of children against diarrheal diseases and tuberculosis and to say further that it does not interfere with the nutritive value of the milk

Dr Richard Cole Newton, Montclair, N J I have always had a prejudice against pasteurization of milk I was brought up in a community where it is the custom to cry down this process saying that it may produce scurvy in children In these days babies are getting a more liberal diet than formerly We tell mothers to give them apple sauce and so on earlier than we used to do Like Dr Ravenel, I have seen very little scurvy or rickets of late, and it is almost criminal for a man to have much of them in his practice, because they are so easy to avoid

One or two of the discussers have asked how the cloth diaphragm is used One farmer, who had a dirty old barn and was very poor, just took a clean rag and tied it with a string over the top of an ordinary open pail He took his milk to a hotel which used a lot of milk, and his milk was found to be the cleanest of any that was brought there The milk pail that was originally used had a cover that fitted on the top like the covor on any kind of a pail There was a circular opening in the cover 3 or 4 inches in diameter, across which the cloth was stretched There was a rim around this opening about 2 inches high and a cap or ring, pushed down over this rim, held the cloth fast The cloth was renewed for every one or two cows It has been found as good or nearly as good to use a metallic hood over this opening, and when the men milk, the stream of milk is directed horizontally into the pail Cloth diaphragms are not used in some of the large dairies nowadays Nearly all the dirt in the milk comes down out of the air as dust and may be arrested on the top of the hood

Dr Reynolds spoke about the length of time between the milking and the delivery of the milk to the consumer Unfortunately, in New York City it does not seem possible to get the cows and the children very near together It was said that years ago an experiment was tried in Paris on foundlings nearly all of whom were syphilitic and practically all of whom died very young female asses were driven up to the foundlings so that the children could suckle them with the result that many of them lived—a striking illustration of the advantage of feeding babies warm milk There is no question about the enormous advantage of this procedure but in New York and Brooklyn it seems impossible so we have to rely on pasteurization Milk can be sold at a profit when sold in the manner described in my paper—at 10 cents a quart, that is about as cheap as clean milk can be produced

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Fresh Air and Tuberculosis —No one should sleep in a closed room whether sick or well Bad air is one of the main causes of tuberculosis Fresh air is one of the cardinal means of cure —E Cummings in *Jour Outdoor Life*

A STUDY OF SALIVA AND ITS ACTION ON TOOTH ENAMEL IN REFERENCE TO ITS HARDENING AND SOFTENING *

JOSEPH HEAD, M D, D D S
PHILADELPHIA

Enamel softening has been considered to be necessarily associated with roughening of the surface, loss of luster and dissolution of the cemental substance that binds the enamel rods together, and whenever enamel decalcification is associated with decay of dentin this conception of enamel softening is only too accurate. But this conception seems to be only a part of the story, so to speak — the final part rather than the complete process of enamel degeneration.

For instance, 1 to 1,000 lactic acid and water at mouth temperature will cut tooth enamel in thirty minutes with a rough white surface. A tooth placed in 1 to 500 lactic acid and some salivas will be unharmed. A tooth placed in this solution made with other salivas, after three or four days may show the enamel perfectly smooth and to all appearances normal, and yet it can readily be pared to a slight distance with a lancet. A 1 to 500 saliva and lactic acid solution has an extremely acid taste and instantly turns litmus brilliantly red. A 1 to 20,000 lactic acid and water solution will, at the end of three or four days, leave the tooth enamel unharmed to all appearances, and yet the outer surface of the enamel will, with the edge of the lancet, be found to have distinctly softened. A 1 to 500 lactic acid solution with my saliva, although the solution has a decidedly acid taste, will produce this identical effect. The appearance of the enamel is unchanged but distinctly softened to the cut of a lancet, although before the tooth has been immersed the lancet is unable to make any impression on it.

The action of water solutions of acid calcium phosphate and acid sodium phosphate on the teeth has been mentioned by Kirk, stress being laid on the fact that these salts cause smooth white decalcification. As a matter of fact, many acids in water solutions cause smooth primary softening, if the solution is sufficiently weak. Saliva ordinarily restrains the action of most acids up to a certain point, and then begins with the smooth decalcification and ends with the same rough white decalcification that we find in a water solution. The saliva solution is ordinarily from ten to twenty times weaker in its action on enamel than is a water solution of the same acid strength. The acid sodium phosphate and acid calcium phosphate are, however, intensely interesting in their action, not only in water solutions but in saliva solutions. Acid calcium phosphate 1 to 5 000 water solution, and acid sodium phosphate 1 to 20,000 water solution at the end of two days, will turn tooth enamel into a cloudy, pearly white, with a clean smooth surface. This surface is distinctly softened to the cut of a lancet. If, however, these teeth are removed from the solutions before the process advances too far the cloudy appearance will in time disappear, and the tooth enamel will resume its normal appearance. This phenomenon occurred many times, but once when I retested the hardness of these teeth with a lancet I found that not only had the white color disappeared but the superficial softening of the enamel had disappeared also. At first I attributed this disappearance of the softening of the enamel to previous faulty observations, but the same phenomenon occurred in my lactic acid test. A tooth that had been placed in a 1 to 20,000 lactic acid watery solution, at the end of a few days was slightly softened to the cut of the lancet, but a month or so later the lancet would not cut it. It was then that the possibility was made apparent that partially softened smooth enamel could reharden itself if the decalcification had not progressed too far.

I then made the following test. Two sound teeth with enamel impervious to the lancet were each placed in a lobe of a navel orange. These lobes were each placed in a bottle with a few drops of ether to prevent fermentation, and kept at body temperature for two days. At the end of that time the teeth were removed and examined. The lobe around one of the teeth had fermented, the lobe around the other had not. The tooth in the fermented lobe showed a smooth, white, translucent area of decalcification, running from the cutting edge to about one-third of the distance to the neck. The rest of the enamel was normal to all appearances, and yet the surface, both of the white and the apparently normal enamel, was readily pared with a lancet. The lobe in which the other tooth was embedded had not fermented, and the enamel also seemed normal, but here again the outer surface of the tooth enamel was distinctly softened. These teeth were then washed in water and kept in some of my saliva at body temperature for two weeks. At the end of five days there was a decided rehardening of the enamel surface, and the white area of decalcification on the tooth mentioned had half disappeared. At the end of ten days the enamel could no longer be scratched with a lancet, at the end of two weeks the white spot of decalcification had almost if not entirely disappeared, and both teeth appeared perfectly normal.

That saliva does possess the power of restraining enamel from carbon dioxid decalcification was proved as follows. A sound extracted tooth was placed in a sparklet or automatic soda water former, where the liquid within could be charged from a carbon dioxid cartridge. Thirty cubic centimeters of saliva were added which had been obtained by chewing rubber. The saliva was then charged with carbon dioxid and the sparklet placed in a culture oven at a temperature of 98 F for thirty days. At the end of that time it was taken out and appeared unharmed. The tooth was then washed with a little ether and replaced in the syphon with distilled water. This water was then charged with carbon dioxid and the flask replaced in the culture oven for twenty-four hours. At the end of that time the enamel showed a chalky decalcification that could be scaled off with the finger nail.

This protective power of saliva is also exerted against lemon, orange, grape, grape fruit, strawberry, rhubarb and cherry, the special action of which was the subject of a paper[1] I wrote in 1908.

These experiments with extracted teeth, weak acid solutions and tests with a sharp lancet in the hand, while suggestive, seemed to me not sufficient to establish so reactionary a doctrine, so while morally convinced of the truth of my assertion that softened enamel could reharden, I immediately started to perfect a machine that would show in the minutest degree just how far a given force would drive a standard punch into sound enamel, partly decalcified enamel and rehardened enamel, if it did reharden, from the effects of slight decalcification. I will not dwell on the discouraging task of making good mechanics work with a scientific

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* Read in the Section on Stomatology of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June, 1912.

[1] Read before the Harvard Odontological Society, March 7 1908.

conscience. They would not do as they were told, and much of the adjustment had to be done by the deviser of the instrument, which from at first having an error of 1/500 of an inch, finally developed into a microdynamometer that could deliver 475 pounds pressure on a punch, the penetration of which could be measured up to 1/600,000 of an inch. Something approaching this accuracy was necessary as it was found experimentally that the scope of the average test lay usually within 1/10,000 of an inch. It was, however, decided to set the register so that it would measure in units of 1/300,000 of an inch, which as can readily be seen could be reduced by a table to microns or tenths of microns, one micron being equal to 1/25,000 of an inch, twelve of the machine units, therefore, being equal to one micron. The pressure was given by a mercury gauge to which the punch was attached. A micrometer screw supporting the anvil on which the specimen for testing was to be placed was strongly connected by castings and heavy drawn steel rods beneath the mercury gauge and punch. The pressure was applied to the specimen by placing it on the anvil and raising the anvil by the screw up against the punch until the mercury marked the pressure desired. The penetration of the punch into the specimen was made known by a microscope equipped with a specially constructed filar micrometer, which microscope was solidly screwed to the anvil. This microscope was then adjusted and set so that it could accurately divide into the desired number of parts a glass scale attached to the punch. By this device, all error in the use of the machine was largely thrown out, since only the relation between the punch and the anvil was within the scope of measurement.

In making the various tests three punches are used: a heavy steel punch with a flat hardened circular point 1/50 of an inch in diameter, an iridium pointed punch 1/50 of an inch in diameter for testing acid erosion, it will stand up to 25 lbs. without showing compression; a diamond-pointed punch with a circular, flat point 1/50 of an inch in diameter that can be used in acid solutions and will also readily stand 100 lbs. pressure. Twenty-five pounds pressure with the diamond point will give a penetration equal to 75 lbs. with the steel point. This is no doubt due to the greater sharpness of the diamond edge over the steel.

If, therefore, the specimen is so adjusted and set under pressure that there will be no give between it and the anvil, it is possible to determine accurately within, say, one-tenth of a micron, just how far the punch would penetrate under a given pressure. For instance, the specimen is carefully ground with a Reichert section grinder so that there is a flat, large base. A small spot on the top of the enamel is ground parallel to the base. This forms the area to be tested. Any pressure exerted on the enamel spot by the punch is directly expended on the enamel, without any side give between the base of the specimen and the anvil. The specimen with parallel sides is placed on an agate slab and the slab placed on the anvil. The punch is adjusted near the edge *of the ground enamel and given a pressure of 5 pounds*. A reading by the microscope attached to the anvil is then taken on the scale attached to the punch. The pressure is then raised to the desired amount, say, 75 pounds, for a given time, and then the pressure is reduced again to 5 pounds and another reading taken, the difference on the scale representing the penetration of the punch. To shift the specimen under the point for the different measurements the agate slab is moved, not the specimen on the slab. This eliminates variations in the spring of the specimen, since the compression of the parallel slab on the anvil under a given pressure, will always be the same.

Five or more measurements are usually made for each reading and the average taken. By this means the density and strength of normal enamel can be shown as can also the variations from the normal enamel caused by strong acids, water solutions of acids, saliva, fresh and stale acid saliva solutions, and the recovery of enamel from the effects of a slight acid decalcification and the rehardening of its surfaces after it has been ground with a stone.

All analytical analyses of saliva heretofore have been hampered by the fact that the investigator of it first started by chemically breaking it up, thus largely destroying it as saliva. All analytical investigation of saliva from a dental point of view up to the present time, has been of little value owing to the fact that normal saliva may be alkaline to lacmoid or congo red, neutral to litmus, and acid to turmeric paper, all at the same time. How saliva reacts to lacmoid, litmus or turmeric may be purely of academic interest, but how it may react on enamel and dentin is a vital question that interests every man that lives, and this machine has, it is hoped, made it possible for enamel to be its own indicator of how a saliva may affect it. Since the first days of physiologic study, saliva has been a most tempting field for investigation because it is the body secretion most easily obtained in a living state. It ought to be at least of equal value to the diagnostician as urine, but up to the present time it has not been. This may lie in the fact that saliva is a living substance and urine is an effete product that lends itself to a chemical analysis that would absolutely destroy saliva as saliva. Chemical analysis that breaks up the individuality of living saliva is of little more value in showing the vital action of saliva than fried chicken would be in showing the beauties of a cock fight.

I am far from discouraging saliva analysis of any kind. Epinephrin may illustrate the living secretion of the suprarenal capsule or it may not. Salivary extracts or chemical products are interesting but inconclusively related to the living action of the secretion and, therefore, while enzymes of a curious and even therapeutic nature may be extracted from saliva, no one can prove that they justly represent the action of the living secretion unless some means are devised to make control tests with the living saliva that show the corresponding action. This machine, it is hoped, will make it possible to test on tooth enamel the acid restraining power of various living salivas in relation to a standard water solution of acid. Salivas vary in this power. The same saliva may vary at different times, apparently according to the condition of the patient.

The conditions then are as follows: During sickness the teeth, from clinical experience, are known to decay. This may be due partly to acid medicine or lack of care, but with every allowance for these sources of error, it seems to be well established that severe or chronic illness *in some way may render the teeth sensitive to deterioration*. Formerly it was supposed that some product was extracted from the enamel through the blood circulation but this is now fully disproved by the histologic knowledge that human tooth enamel is, to all intents and purposes absolutely shut off from the blood current. If a relation between ap [illegible] loss of acid protecting power [illegible] lished, a beginning in the saliva would have been example, the test that was made on a specimen of tooth enamel that I use for an illustration One side was ground to a flat, broad base, on the other side the enamel was ground in a small corresponding parallel plane This was placed on the anvil of the machine and raised up against an iridium point 1/50 of an inch in diameter until a pressure of 5 pounds was reached A reading was then taken on the micrometer scale and noted The anvil was raised up and down repeatedly until all give between the specimen and anvil disappeared, and the 5 pounds pressure always gave the same reading Then fresh lemon juice and water 1 to 100 was placed on the specimen around the point and the point relaxed so that the fluid could readily get underneath At certain intervals of time the pressure of 5 pounds was tried and a reading taken which showed a loss of tooth structure as follows

2	minutes	0 8	micron
5		1 2	
10		1 4	'
35	'	2 3	
60	'	2 8	"

Thus, in one hour there was a loss of 2 8 microns of tooth enamel This same test was then made on the same tooth enamel with a fresh saliva solution of lemon juice, 1 to 100 This solution turned litmus red and was distinctly sour, and yet after an hour's application the enamel showed a loss of only 0 3 of a micron We might, therefore, express the restraining factor of that saliva as 28 3 or 9 Numerous other tests have been made of a similar nature and all seem to give consistent figures They almost invariably seem to prove the power of saliva to restrain the action of lemon juice on enamel They also show that some enamels are much more resistant to decalcifying action than others

As an illustration, another test might prove interesting This specimen was ground longitudinally for a base along its axis and a small parallel plane ground on the enamel of the opposite side *A solution of 1 to 100* lemon juice and water applied for an hour dissolved 1 0 micron Saliva and lemon juice, 1 to 100, applied for sixteen hours showed no loss of tooth tissue at all It was then tested with the steel punch 1/50 of an inch for density and was found so softened that from 60 pounds to 70 pounds pressure could not be obtained The softened enamel simply refused to support the punch under such a pressure The specimen was then placed in fresh saliva and set in the culture oven at blood heat for seven hours, the saliva being changed every half hour At the end of that time the tooth was again tested with the steel punch and was found to have so hardened that 75 pounds pressure was readily withstood and a various penetration noted of 3 5, 2 8, 3 2, 4 5 microns No doubt it would have hardened up more but the various testings had so strained the specimen that it was considered advisable to continue with others The great softening and hardening apparent in this last test is no doubt due to the enamel being very thin so that the variations were partly due to the dentin underneath But tests on two bicuspids extracted from the same mouth for the purpose of regulation, with perfect enamel, to all appearances show conclusively that enamel has an extraordinary power of hardening and softening under various conditions, although no acid solvent at all was used

These specimens were soaked for about ten days in a 1-to-10 dilution of liquor formaldehydi in water They were then cut flat at the neck and 1/80 of an inch ground off the cusps of Specimen 1, and 1/50 of an inch ground off the cusps of Specimen 2 The diamond point was used at 25 pounds pressure

Specimen 1 (buccal cusp) when freshly ground gave an average softness of 1 5 microns, the readings being 1 1, 2 0, 1 2, 1 3, 1 8, 1 2

Specimen 2 (buccal cusp) gave an average softness of 1 6 microns, the readings being 1 2, 1 6, 1 6, 1 5, 2 1

Specimen 1 (lingual cusp) gave an average penetration of 1 2 microns, the readings being 1 3, 1 2, 1 3, 1 2, 1 0

Specimen 2 (lingual cusp) gave an average penetration of 1 1, the readings being 1 3, 0 9, 1 1, 1 3, 0 9

Here in two specimens, apparently of similar teeth from the same mouth, we find the buccal cusps having *the same hardness with 0 1 of a micron, and the same* with the lingual cusps, while the lingual and buccal cusps on the same teeth show a variation in penetration of from 0 5 to 0 3 micron respectively

I speak of this comparison to show the consistency of the machine measurements I shall now proceed with the tests on Specimen 1

After being tested the specimen was placed in distilled water for three hours and again tested The buccal cusp had softened from 0 3 micron to 1 8 microns, the measurements being 1 4, 2 4, 3 9, 1 9 The lingual cusp had not changed, showing a penetration of 1 2 microns, measurements being 1 5, 1 3, 1 3, 1 3, 0 8

The tooth was then placed in J H saliva over night.

In the morning the buccal cusp showed a slight hardening of one point, to the average hardness of 1 7, the measurements being 1 8, 1 3, 1 8, 2 2, 1 6

The lingual cusp had hardened 0 2 to the average of 1 0, measurements being 1 1, 1 2, 1 0, 0 8, 1 1

The tooth was allowed to stay in J H saliva, at room temperature, all day (nine hours) and tested again, when the buccal cusp had hardened seven points, to the average of 1 0, measurements being 0 9, 0 8, 1 2, 1 0, 0 9, while the lingual cusp had hardened 0 1 to the average density of 0 9, measurements being 0 4, 0 7, 1 1, 1 3, 1 1, 0 7 In this instance, the buccal cusp started at 1 5, softened to 1 8, and hardened to 1 0 The lingual cusp started at 1 2 and stayed the same, or consistently hardened to 0 9

It was decided to try the saliva of my assistant on this specimen

The specimen was placed in incubator, 98 F, with A J F saliva and a little ether for 36 hours, and buccal cusp showed a softening of 0 5 or an average of 1 5, measurements being 1 7, 1 4, 1 2, 1 4, 1 5, 1 5 Lingual cusp remained the same or 0 9, measurements being 1 0, 0 8, 0 8, 1 2, 0 6 The specimen was kept in A J F saliva for a day longer, when the buccal cusp showed a further softening of 0 7, penetration being, 2 2, the measurements being 1 4, 3 4, 1 5, 2.0, 2 6 The lingual cusp showed a softening of 0 3, having an average penetration of 1 3, measurements being 1 6, 1 6, 1 4, 1 1, 1 0

The specimen was then placed in a 2 per cent dilution of liquor formaldehydi in water for sixteen hours, room temperature, when the buccal cusp was found to have hardened 1 2 to 1 0, measurements being 1 3, 0 8, 1 0, 1 0, 0 8, and the lingual cusp had hardened from 0 1 to 1 2, measurements being 1 4, 0 8, 1 0, 1 8, 0 9

Specimen 2 The buccal cusp showed a hardness of 1 6, the lingual cusp a hardness of 1 3 It was placed in A J F saliva and 2 per cent ether in incubator at 90 F for three and one quarter hours and tested again The buccal cusp had hardened 0 5 points to 1 1, measurements being 0 9, 1 0, 1 2, 1 2, 1.2 The lingual cusp showed a hardening of 0.2 points, having an average of *0 9*, measurements being 0 8, *1 0, 1 3, 0.9, 0.8, 0 9* The specimen was then replaced in the same saliva in the incubator for two days and the buccal cusp showed a further hardening of 0 1 point, giving a penetration of 1 0, measurements being 0 5, 0 8, 1.2, 1 2 1 0 1 2, 0 8

The tooth was then placed in J H saliva, at room temperature for eight hours, when the lingual cusp showed a softening of 0 6 point or an average of 1 5, measurements being 1 2, 1 4, 1 1, 1 9, 1 9, 1 7, 1 0

The tooth was then placed in A. J F saliva, in incubator for fifteen hours, when the buccal cusp was found to have softened 3 points to 1 3, measurements being 1 4, 1 3, 1.3, 1 2, 1 2, while the lingual cusp had hardened 5 points to 1 0, measurements being 0 9, 0 9, 1 0, 1 1, 1 1

The specimen was put in A J F saliva in incubator and the saliva was changed every half hour In four hours, the buccal cusp had hardened 2 points to 1 1, measurements being 1 2, 1 2, 1 1, 1 2, 1 0, 1 2, 1 0, while the lingual cusp remained about the same, showing also a penetration of 1 1

The specimen was then placed in A. J F saliva and 2 per cent ether in incubator for twenty four hours, when the buccal cusp was found to have softened from 0 5 points to 1 6, measurements being 0 9, 0 8, 2 1, 1 4, 2 8, 1 6, 1 4, and the buccal cusp had softened 0 2 point to 1 3, measurements being 1 4, 1 3, 1 2 1 2, 1 3

Then 5/1000 of an inch was ground off the tooth surface and the cusps were again measured to see how they would compare with the original tests The buccal cusp showed an average penetration of 1 7, one more than the original test, measurements being 1 7, 1 8, 1 6, 1 8, 1 6, while the lingual cusp showed exactly the same hardness, having a penetration of 1 1 The tooth was then placed in the incubator with A J F saliva changed every half hour for six hours The buccal cusp hardened 0 4 point to 1 3, measurements being 1 9, 0 9, 1 2, 1 3, 1 0, 1 6, 1 2 The lingual cusp had softened 0 1 point to 1 2, which was practically remaining the same, measurements being 1 2, 1 4, 1 2, 0 8, 1 2, 1 4

The tooth was then placed in A J F saliva and ether in incubator over night, when the buccal and lingual cusps showed an equal penetration of 1 3, the buccal measurements being 1 4, 1 0, 1 6, 1 4, 1 3, and the lingual measurements being 1.2, 1.2, 1 4, 1 2, 1 4

This softening and hardening of enamel has a very practical bearing in relation to mouth cleansing and the use of brush and dentifrices Enamel that in its hardest state would only show insignificant wear to dentifrice grit and friction in a temporarily softened state may, through a good brushing with grit, lose a very material amount of tooth structure This softening and hardening may readily account for the reason why some patients, especially those fond of fruit, wear their teeth down to the gum, at a comparatively early age The mere friction of mastication is sufficient to take off a layer of enamel softened by fruit or vinegar, which if left to itself might reharden

I have made hundreds of tests with this machine, but as these are largely of interest to dentists I will reserve them for another paper, where there will be ample space for the tables that should, of necessity, accompany my findings concerning the variations in the action of enamel, which variations are so extraordinary as to be almost beyond belief

But that enamel will harden and soften within certain limits, I am convinced And that this hardening and softening is influenced by the saliva and foodstuffs is to me beyond the question of a reasonable doubt This action I also believe may occur in dentin, but my tests concerning this latter are not sufficiently numerous to serve as a basis for a positive assertion

For those who are interested I give a more detailed description of the microdynamometer for measuring the hardness and softness of tooth enamel This machine can measure to 1/600 000 of an inch just how far a standard punch will be driven into enamel by a standard force

It is now gauged to measure to 1/300,000 of an inch, which being 1/12 of a micron, the figures are mathematically reduced by a table to 250/1000 of an inch, or tenths of microns, so that as microns or tenths of microns, they can be easily understood at a glance The tenth of a micron is the unit of measurement used in the table

The pressure is given by a mercury gauge (9) to which the standard punch (2) with glass scale (3) is attached

The pressure is applied to the specimen (1) by placing it on an agate slab with parallel sides (4) and the slab on the anvil (5) and raising the anvil by the micrometer screw and ratchet wheel (8) up against the punch until the mercury gauge makes the pressure desired

The penetration in the specimen is made known by a microscope (6) which is equipped by a specially constructed filar micrometer (7) which microscope was solidly screwed to the anvil (5) This is then adjusted and set so that it can accurately divide into the desired number of parts the 1/1000 of an inch divisions on the glass scale attached to the punch

A counter weight (10) makes the mercury gauge start at 25 pounds pressure as the mercury gauge is not accurate before that pressure is obtained

(11) Electric lights for lighting the specimen and illuminating the microscope

(12) Ratchet screw for raising or lowering the glass scale attached to the punch

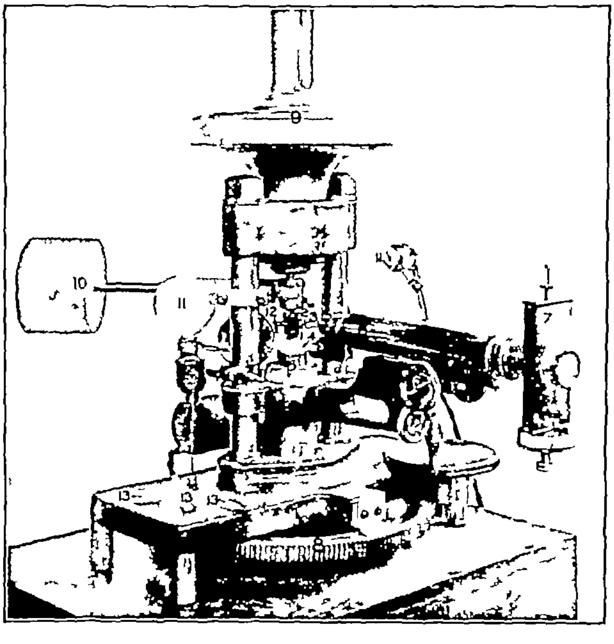

Fig 1 —Full view of microdynamometer with the exception of the top of mercury gauge

(13) Various tooth specimens ground and prepared for action

If, therefore, the specimen is so adjusted and set under pressure so that there is no give between it, the slab and the anvil, it is possible to determine accurately within, say, 1/12 of a micron just how far the punch can penetrate under a given pressure

For instance, the specimen is carefully ground on the microscope grinder until it has a flat, large base and a small spot on the top of the enamel ground parallel to the base It is essential that the spot tested should be absolutely parallel to the base in order to avoid side give

Three punches are used A hardened steel punch 1/50 inch in diameter, designated as A This is used purely for ascertaining how far a penetrating force under varied conditions will drive it into the enamel

A punch consisting of an iridium point set into a brass rod which is used to determine t [illegible] on enamel, whether erosion or swelling

A diamond punch design [illegible] inch i diameter, and used at a [illegible]

All of these punches a [illegible] the anvil at a pressure [illegible] used on the test, as a preliminary to any measurements being taken

The A punch, unless otherwise stated, will be first set at 75 pounds, then the pressure reduced to nothing Then, without moving the specimen in the agate slab that is ground parallel, the slab is moved so as to place a new area of enamel under the point The punch is then placed at 5 pounds pressure and a reading taken through the microscope on the glass scale attached to the punch The pressure of 75 pounds is then exerted for ten seconds, when the pressure is reduced to 5 pounds and a reading taken The difference is the penetration

For various readings on the same enamel surface during a single test, the agate slab is moved as desired, but the specimen is not moved on the slab as that would necessitate a new setting

The same procedure is used with the D punch as the A or B punch The times and pressure varying according to the test desired

The same procedure is followed with B punch where acid action on enamel is to be determined The specimen is set at 10 pounds, then reduced to 5 pounds and released, and again placed at 5 pounds until the same reading is always obtained Then the acid is applied and at desired intervals, the point is placed on the enamel and the readings taken, showing erosion or swelling or a negative result as may be the case

A negative result with the B punch may be followed with tests with the A or D punch that show softening to an astonishing degree

ABSTRACT OF DISCUSSION

Dr G V I Brown, Milwaukee Wis I believe that when Dr Head has established the facts pertaining to saliva and enamel as he has presented them to day and there seems little reason to doubt that they will be established, and when this knowledge may be fitted into its proper niche in the greater structure that is building in the pathology of the different bodily divisions, then saliva will have a significance that we have never before accorded it

Dr C J Grieves, Baltimore I did some work for the American Society of Orthodontists on decalcification of enamel, and I soon found that I knew nothing about the saliva and could not find many who did know anything about it There are many things said, but there is little known as to the difference between living and dead saliva, if I may use that term I found that enamel reacted very differently to these two kinds of saliva Dr Head had done some work along this line in regard to the ordinary aqueous solution and an acid solution in the saliva The mucoid element in saliva is commonly condemned, and rightly so in the carious mouth in which the glycogen or carbohydrate portion is over 25 per cent, for it then becomes the normal habitat of that caries producing organism the decalcifying organism, I believe that normal mucus in the normal mouth is what makes for tooth protection, as it has already been shown to do in the gastro intestinal tract That is what makes the difference between the saliva solution and the aqueous solution

I further found that all alloys were disassociated electrolytically in the mouth and we might well reason that enamel is decalcified by the same process which shortly destroys smooth surfaces of alloys in the mouth, the only substances not subject to disassociation are the mucoid or gelatinous substances, the common mouth mucus belongs to this group and I believe out of the mouth it protected the enamel from acid disassociation in Dr Head's test cases, as I am sure it does by a film in the mouth We all have seen acid decalcifications produced by orthodontia appliances These decalcifications are said to be rubbed out by prophylaxis, but I do not believe this I think that the intercement substance has been destroyed by acid between the enamel rods and the interstices left are filled with mucus and the decalcified spot apparently disappears If it is desiccated, it will then show up as an opaque spot I firmly believe in the protective action of vital mucus in normal cases but not when there is over 25 per cent carbohydrate and the mucus is acid from fermentation In erosion the mucus is nearly all in solution and there are few films on the teeth Every normal tooth is covered by an alkaline film, where there are few films and the mucus is in solution, the action of acid sodium phosphates and calcium phosphates produces erosion

Dr. Joseph Head, Philadelphia I have done this hundreds of times with the same characteristic results I have convinced myself, and now I want somebody else to try it

Dr E S Talbot, Chicago Dr Latham and I have been working on this for perhaps ten or twelve years from the internal point of view We took the ground that these changes in the enamel were due to changes in the blood, and we actually demonstrated pathologic conditions of the dental pulp and the tissues which as far as we went are no doubt correct, but that work does not interfere at all with this work that Dr Head is doing I am not sure but we shall find that the work which Dr Head is doing here will to a great extent solve the problem of decay of the teeth That softening of the enamel and dentin take place through diseases of the body, there is no question We have all seen enamel soften and the teeth decay very rapidly in tuberculosis and other diseases, the point was to prove that softening and decay did take place—I believe that they do—by establishing a degeneration of the dental pulp and the tissues of the cementum and enamel The work which Dr Latham and I have been doing in demonstrating that the softening of these tissues may take place from systemic conditions, added to Dr Head's work, will help to solve this problem It seems strange that this softening and hardening should take place in so short a time

Dr Joseph Head, Philadelphia I cannot explain how these things occur, because I do not know I am simply in a maze of astonishment I am convinced that enamel will harden and soften Since this has come to my attention, I have noticed spots that apparently seem to disappear, and I have had other dentists make the same observations

If that spot disappears, would not this prove that the enamel is not the dead, inert substance that we are supposed to consider it? I cannot help feeling that the enamel is undergoing a series of changes, a sort of unseen action in itself, and that it is capable in its own molecular being of softening and hardening, something similar to the Bermuda rock which hardens under certain conditions It is nothing unusual for crystals to harden and soften again

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A CLINICOPATHOLOGIC STUDY OF CARBON MONOXID POISONING*

J W McCONNELL, M.D
AND
WILLIAM G SPILLER, M D
PHILADELPHIA

REMARKS BY DR MC CONNELL

Through the courtesy of Dr Charles K Mills I am enabled to make this report of a fatal case of poisoning by carbon monoxid, the patient having died in his service at the Philadelphia General Hospital As a recital of mere symptoms is almost valueless in these days of search for ultimate conditions, Dr William G Spiller kindly undertook the pathologic study and by his unusual findings established a sufficient reason for this presentation I take this opportunity of expressing my appreciation of Dr Spiller's kindness in associating his microscopic work with my clinical study

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* Because of lack of space this article is abbreviated in The Journal. The complete article appears in the Transactions of the Section and in the authors reprints

* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

* From the Department of Neurology and the Laboratory of Neuropathology of the University of Pennsylvania and from the Philadelphia General Hospital

Poisoning by carbon monoxid may be divided into three great classes, the division being determined by the mode of onset of the symptoms acute poisoning, chronic poisoning and relapsing carbon monoxid poisoning

Under acute poisoning are included those cases in which the manifestations appear very promptly after the exposure of the individual to the toxic agent, whether such exposure be accidental or intentional The symptoms include nausea, an indefinite feeling of illness with fulness of the head, headache, vertigo, great muscular weakness, and, if the influence of the gas is continued, drowsiness, unconsciousness and loss of control of the sphincters Muscular twitchings or even convulsions sometimes occur The skin and mucous membranes may be cyanotic and occasionally an erythematous rash resembling frost-bites may be seen over the malar prominences

The sequelae of acute poisoning include pneumonia, cardiac palpitation, localized hyperemias, gastro-intestinal disturbances, transient glycosuria, cutaneous eruptions, localized edema and gangrene In the nervous system, paralyses of central or peripheral type and choreiform movements are seen, persistent headache is complained of and mental changes take place, often only mild hallucinatory states but more commonly distinct confusional insanities

Under the heading of chronic poisoning by carbon monoxid are placed those cases presenting headache, nausea, vertigo, general weakness and anemia with some slowness of intellectual activity and failure of memory These are all symptoms of the acute type, but appear gradually in individuals who are chronically exposed to the toxic action of carbon monoxid

The third class is designated as relapsing carbon monoxid poisoning, a term used to indicate the condition in those who, having apparently recovered from the initial effect of the poison, develop after a period of fair health a grave type of symptoms leading to death Coplin, in 1905, explained the condition most uniquely, but without basis of fact He said

> In gas poisoning there takes place a combination of carbon monoxid with the hemoglobin of the hematoblasts present in the bone marrow The blood making process is so crippled that when old injured cells are worn out and must be replaced there are no new cells prepared

The occurrence of relapsing carbon monoxid poisoning was explained by Becker and Schwerin on the basis of a "deep-seated disturbance of the regeneration of all organs, especially of the vascular walls and the ganglion cells of the nervous system, as is evidenced by the secondary hemorrhages, idiocy, imbecility, etc, which are observed as sequelae"

Accounts of individuals suffering from relapsing carbon monoxid poisoning are not rare, and I could consume time and patience in reciting cases illustrative of the type of disease under discussion One or two, however, that are strikingly similar will suffice for the purpose

A man, aged 69, a porter, whose case was reported by Simon in 1868, was asphyxiated by carbon monoxid His recovery was marked by persistent vertigo and headache A month after his apparent return to health he developed a right hemiplegia quickly followed by death Simon also reports the case of a woman, aged 46, who partially recovered from the acute effects of poisoning by carbon monoxid and subsequently developed mental disturbance, convulsions and rigid limbs She was aphasic and died without any improvement in the nervous symptoms Edsall calls attention to the fact that symptoms of much gravity often may be caused by a mild attack of poisoning, but these symptoms cannot be attributed to the immediate effects of the carbon monoxid, for Gruber, Sedgwick and Nichols and many others have fully demonstrated the non-persistence of the gas in the blood

The following is the clinical report of a case which I observed for about six days

Case 1 —*History* —The patient, C S, was admitted to the alcoholic ward of the Philadelphia General Hospital in a stuporous condition, Nov 28, 1911, supposedly suffering from alcoholism There was no evidence of paralysis or other physical disability As the patient did not improve she was transferred to the medical ward on December 1

Except for very slight mental improvement the condition of the patient remained unchanged and she was transferred to the neurologic wards on Dec 13, 1911

From her son it was learned that the patient had always been well, she had never had a sick day until two weeks before admission when she became mopey, dragged her feet, seemed tired and wanted to lie down She talked, took nourishment, did not have pain and made no complaints Her last two days at home were notable because of the loss of control over the bladder and bowels About three weeks before admission she was overcome by coal gas while sleeping She was found unconscious and taken to a hospital where after ten hours she recovered consciousness, and in two days was discharged fully recovered and able to attend to her usual duties This condition of good health lasted but a few days Her family, past medical and social histories are immaterial Her son said that she complained of the stiffness of the upper extremities but attributed it to the artificial respiration movements employed at the hospital

Examination —Dec 14 1911, the patient was examined by Dr Mills and myself She was unconscious, lying on her left side, irresponsive to sensory stimuli, that is she showed no change of countenance when pricked with a pin although the plantar reflexes were very active Her face had the appearance of general muscular contraction giving to it a frowning or stern expression a sort of squeezed expression The corrugatores supercilii the orbiculares palpebrarum and zygomatici muscles were apparently spastic. The jaw was tightly closed

The malar orbiculopalpebral and the fronto orbiculopalpebral (McCarthy's) reflexes were very prompt The left pupil was slightly larger than the right, which was irregular Both reacted promptly to light

The upper extremities were very spastic in the right angle position at the elbows with the arms held close to the sides and the wrists and fingers semiflexed All the deep reflexes, muscle and tendon jerks were plus Those examined were the von Bechterew the coracobrachial the biceps, the triceps and the radiocarpal

The abdominal reflexes were present The patient was incontinent of urine and feces

The right lower extremity was spastic in flexion at the knee and on the pelvis The left lower extremity was spastic less so than the right and almost in extension The deep reflexes were present and somewhat exaggerated probably markedly so but restrained by spasticity Delayed ankle clonus persistent and marked, continuing for some time, was present on both sides

The plantar metatarsal and metatarsophalangeal reflexes were marked The small toes went down but on careful selective minimal stimulation of the soles of the feet the great toes were extended more than their quiet position which was one of permanent Babinski

Course —The condition of the patient steadily became worse with the development of spasticity of the muscles [illegible] tication so that the stomach tube [illegible] were [illegible] nasal feedings which latter [illegible] regurgitation of the liquid [illegible] nd the larynx.

The patient died on Dec. 17, 1911, nineteen days after admission to the hospital and forty days after the asphyxiation by carbon monoxid. During her residence in the hospital she had no fever except the terminal rise of temperature to 103 F. The pulse rate was uniformly fast, averaging from 90 to 100 beats per minute. Respirations were between 20 and 25 per minute, until the final shallow breathing set in. The blood pressure unfortunately was not measured, but at all times to the finger the pulse was soft and easily compressed.

Laboratory studies of the urine showed no albumin, no sugar and no abnormal microscopic findings. Examination of the blood gave 92 per cent. of hemoglobin, 5,890,000 red cells and 14,300 white cells. The Hoppe-Seyler test for carbon monoxid hemoglobin was negative, the resulting color being brown. This was not made, however, until six weeks after the intoxication.

The especial clinical interest in this case lies in the time which elapsed between the initial poisoning and the development of the grave symptoms, in the bilaterality of the motor symptoms, in the intense spasticity present and in the absence of distinct vasomotor or trophic symptoms.

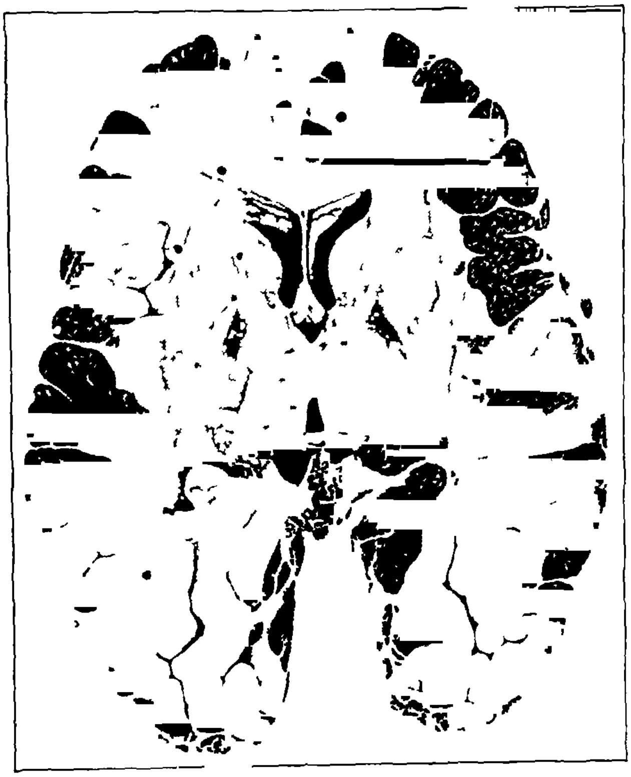

Fig. 1.—Symmetrical areas of softening in the inner segments of the lenticular nuclei.

As I have already stated, the weight of opinion seems to be in favor of the non-persistence of carbon monoxid in the blood and also the non-cumulative action of the gas. There must be, therefore, to explain the relapse, some physical or chemical process, originated by the poison and continuous in its action after recovery from the immediate effects of the acute intoxication. This I leave for Dr. Spiller to elaborate. In the paper by Dana on the functions of the corpora striata the statement is made that "in severe gas-poisoning there is a double softening of the lenticular nucleus due to thrombosis." This is the gross pathologic condition found in many of the reported cases, and fully explains the bilateral motor symptoms which conform to the type spoken of by Mills and Spiller in that the paralysis is less severe in lenticular disease than in capsular lesions.

Finally, many writers call attention to the distinct trophic cutaneous symptoms, but the only suggestion of a skin lesion in this case was the slight erythematous eruption over the cheeks and nose, somewhat like the appearance described by Peterson and Haines. Despite the fact that the comatose state lasted for days there was not a sign of decubitus or any gangrenous process.

REMARKS BY DR. SPILLER

The Betz cells in the case, reported from the clinical aspect by Dr. McConnell, are in a fair state of preservation, and there is little change in the paracentral lobules. The cells of the anterior horns of the spinal cord are well preserved, both in the cervical and lumbar regions. The vessels of the spinal pia and of the pia over the paracentral lobules and medulla oblongata are moderately thickened, and there is a very slight round cell infiltration of the pia.

The inner segment of each lenticular nucleus shows a well defined area of softening (Fig. 1). These areas are almost exactly equal in size, and have almost exactly the same upper and lower limits. The vessels within these areas of softening show calcification of their walls (Fig. 2), so that they stain purple with hemalum, and black by the Weigert medullary sheath method. Numerous round or irregularly shaped masses, most of them having the structure of corpuscula arenacea, are found throughout the softened areas (Fig. 3).

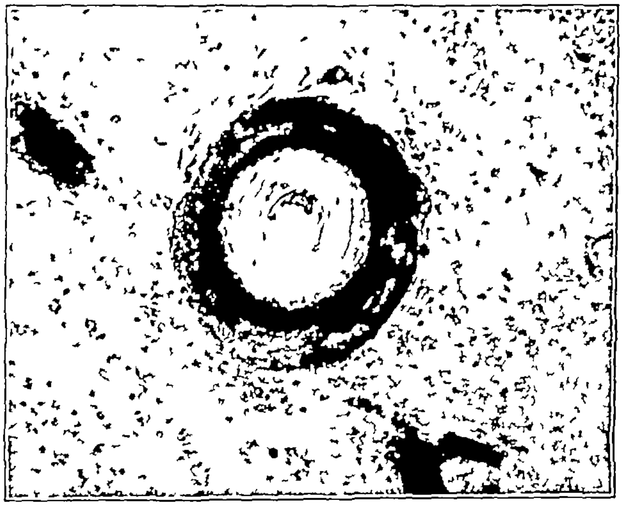

Fig. 2.—Calcified vessel in the area of softening in the lenticular nucleus.

The first thorough study of the encephalomalacia following carbon monoxid poisoning seems to have been made by Klebs; this honor is given to him by Hedrén.[1] Bilateral softening of the lenticular nucleus has been observed for many years as a result of carbon monoxid poisoning, and seems to be confined to the inner segments, but Oppenheim has written in the latest edition of his text-book that the method by which this softening is produced is not fully understood. The symmetrical softening of the lenticular nucleus always suggests carbon monoxid intoxication but it may occur from other causes, as Runeberg has shown (Hedren). In this paper I report a case in which a history of gas-poisoning could not be obtained. The bilateral lesions were not quite so symmetrical as in the case in which a history of gas-poisoning was given.

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[1] Hedrén: Nord. med. Ark., 1902, ii, 4.

Poelchen,[2] in 1888, was able to collect the reports of twelve cases of bilateral softening of the lenticular nucleus following carbon monoxid poisoning, at least, the inference is that the lesions were bilateral in all twelve cases He also found similar changes in the inner segments of the lenticular nucleus and its vessels in a person dead from phosphorus-poisoning, so that phosphorus seems to have the same effect as carbon monoxid The bilateral softening from carbon monoxid poisoning may be remarkably symmetrical, not only as regards the limitation to the inner segments of the lenticular nuclei, but also as regards extent of the lesions upward and downward Poelchen's explanation of this is that the vessels of the inner segments of the lenticular nucleus are very narrow, even at their origin from the basal vessels, are without anastomosis, without vasa vasorum, and therefore dependent alone on the blood circulating within them The arteries of the outer segment of the lenticular nucleus are comparatively large, and probably anastomose with the arteries of the island of Reil If the carbon monoxid poisoning lasted long enough, other vessels would become affected

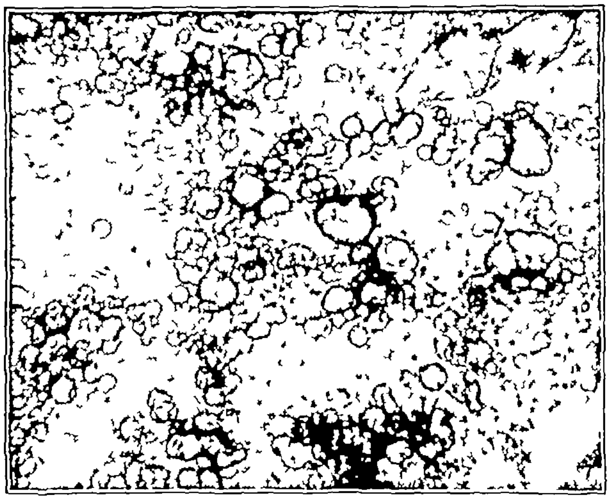

Fig 3—Calcareous deposits (corpuscula arenacea) in the areas of softening of the lenticular nuclei

The most satisfactory explanation for the symmetrical softening has been given by Kolisko,[3] to whom we owe largely our knowledge of the circulation of this part of the brain He states that in addition to the long arteries (arteries of cerebral softening supplying the head of the caudate nucleus, anterior limb of the internal capsule and anterior part of the external segment of the internal capsule) arising from the anterior cerebral artery a number of shorter arteries have their source in this artery which also convey the blood in a different direction from that in the parent stem They are very small, about the thickness of a hair Similar arteries arise from the carotid, the first part of the middle cerebral artery and the posterior communicating artery These fine arteries do not anastomose They supply the anterior part of both inner segments of the lenticular nucleus and the adjoining part of the internal capsule, including the knee The extraordinary delicacy of these vessels with their almost perpendicular course at their origin is the cause of softening in carbon monoxid poisoning In no other part of the brain is the circulation through such short and narrow arteries Kolisko has repeatedly had opportunity in necropsies on those who died a few days after carbon monoxid poisoning to find symmetrical softening in the distribution of these arteries He thinks the great distention of these vessels, which occurs in the early stage of carbon monoxid poisoning and has been known since the time of Klebs, causes thrombosis and a disturbance of the circulation in these vessels

Peterson and Haines[4] state that a large number of experiments on animals forced to breathe carbon monoxid, diluted with either oxygen or air, have resulted in showing that the blood-pressure is at first considerably increased as the result of the stimulation of the vasomotor center A benumbing of this center is then shown by the decrease of the pressure and a distention of the blood-vessels

From this it appears that Kolisko's arteries of cerebral thrombosis are not concerned in the softening of carbon monoxid poisoning, but as some of these fine vessels of which Kolisko speaks have the same course, the change in the direction of the blood-current affects them equally Hemorrhage in the distribution of the arteries of cerebral thrombosis is exceedingly rare Thrombosis, however, has rarely been found in cases of carbon monoxid poisoning Poelchen, Sibelius[5] and other investigators have searched for it in vain, but it was found by Kolisko and by Hedrén

Most extraordinary is the apparently complete or nearly complete recovery from the acute poisoning with recurrence of symptoms, possibly terminating fatally The late symptoms may develop several weeks after apparent health This recurrence of symptoms was observed in the case reported by Dr McConnell, and similar examples may be found in the literature I refer merely to one, as in the extreme spasticity it resembles the case we have studied

Hedrén reports the case of a patient who, having been overcome by carbon monoxid poisoning, was brought into the hospital unconscious and after twelve days was dismissed apparently entirely recovered He continued well three days and then began to have severe headache and pain in the extremities Memory began to fail, general muscular rigidity and stupor developed, and death occurred about twenty-five days after the first return of symptoms The rigidity was so great that the patient was brought from a lying to a sitting position with great difficulty, as he was "stiff as a board" Alteration of the vessels was found in the left lenticular nucleus with thrombosis of the small vessels of this part Small areas of softening and small hemorrhages were found in the spinal cord

How are we to explain these delayed symptoms? There seems to be no support for the view that the occurrence of symptoms immediately or shortly after carbon monoxid poisoning depends on whether illuminating gas or coal-gas was the source of the intoxication The carbon monoxid affects the nerve-cells as well as the nerve-fibers (Sibelius), and yet we can hardly attribute the delayed symptoms to changes in the nerve cells alone They were not conspicuous in the case reported in this paper Delayed symptoms may depend in large measure on previous alteration of the vessels, as by age, and on the concentration of carbon monoxid in the gas breathed Most cases of severe mental disturbance, in old persons, have been of the delayed type (Sibelius)

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[2] Poelchen Virchows Arch f path Anat. cxli 1888

[3] Kolisko Wien klin Wchnschr March 16 1893 p 191.

[4] Peterson and Haines Text Book of Legal Medicine and Toxicology ii 1904

[5] Sibelius Monatschr f. Psychiat u Neurol, [illegible] rg Heft.

Carbon monoxid causes fatty degeneration of the intima and muscular coat of the vessels of the central nervous system Sibelius attempts to give an explanation for the late symptoms, and attributes them especially to the alteration of vessels The vascular changes progress after carbon monoxid has been removed from the blood, and carbon monoxid does not remain more than a few days in the blood Wachholz, however demonstrated the gas in the blood in a fatal case seven days after the poisoning Sibelius thinks it is possible that from carbon monoxid poisoning several organs become affected, and that by imperfect elimination injurious metabolic substances are retained and affect the cerebral vessels In some cases the vascular changes are not progressive, but their results are progressive from continued imperfect nutrition Hemorrhages may occur and cause progressive symptoms, and yet hemorrhages have only occasionally been found Aside from these possibilities we must assume, according to Sibelius, a progression of the vascular changes, although we do not understand the method This I would explain, in part at least, by calcification Sibelius makes no mention of calcification, and I do not know that anyone else has done so The nearest approach to such an observation is by Poelchen In a case in which he examined the vessels, drawn out of the lateral perforated substance at the base of the brain, which supply the inner part of the lenticular nucleus, he found fatty change in the intima and muscular coat, and in the larger vessels the muscular coat was calcified, all other vessels in the brain were normal He does not mention calcification of the small vessels in the inner segments of the lenticular nucleus

Calcification of the capillaries has been found in different parts of the brain under different conditions, also in the globus pallidus by Wollenberg (cited by Obersteiner) It was very pronounced in the inner segments of the lenticular nucleus in the case of gas-poisoning described in this paper, and was present in milder form in the same region in the case to be reported with similar symptoms but without a history of gas-poisoning, although the failure to obtain any history makes the etiology uncertain In no reported case have I found mention of the deposit of calcium loose in the softened tissue or in the form of corpuscula arenacea, as in the case here described This calcification of the small vessels of the inner part of the lenticular nuclei is probably a progressive process and as it increases impairs more and more the nutrition of the areas supplied by the affected vessels It doubtless causes the progressive spasticity of the limbs, but it is difficult to explain the stupor from the limited lenticular lesions It is worthy of note in this connection that in the cases of the family form of softening of the lenticular nuclei reported by Wilson the mental condition seems to have been peculiar

I have sought an explanation for the formation of lime salts in the brain in Wells' "Chemical Pathology"[6] and find it stated there that in calcification the calcium salts come from the blood where they are held in solution or in suspension by the proteids, either as the carbonate and phosphate themselves, or as calcium-ion-proteid compounds, or perhaps both This suspension or solution is an unstable condition, possible only because of the extremely small proportion of calcium in the blood (about 1 10,000), and therefore capable of being overthrown by increased alkalinity of the blood, changes in the proteids or changes in the quantity or composition of the calcium salts

Retrogressive changes in the tissues are a sine qua non Hyaline degeneration, the chemical nature of which is not understood, is a very favorable condition, as also is necrosis when absorption is deficient

In the areas that are to become calcified the circulation is very feeble, the blood-plasma seeping through the tissue as though any dead foreign substance of similar structure, without the presence of red corpuscles to permit of oxidative changes

Calcification may be caused by utilization of the proteids of the fluids by the starved tissues so completely, because of its slow passage through them, that the calcium cannot be held longer in solution This idea has little support but has been advanced The possibility of the formation of calcium-binding substances within the degenerated area has always seemed more attractive, and has received the most attention by investigators

Following is the report of a case which presented the same clinical appearance as did the case of gas-poisoning, but the patient was brought into the Philadelphia General Hospital without any history, and nothing could be learned of his previous condition

Case 2 —F B, aged 70, was admitted Dec 22, 1911, and died Jan 2, 1912 He was stuporous although he answered questions at times when spoken to, but his speech was incoherent He muttered and sang in a low voice, he had no idea of place or time, was incontinent and said he heard and saw the Lord Later he could not be aroused. The right pupil was very much dilated, the left was contracted and irregular *They did not respond to light* There was rigidity of all the limbs, especially at the elbows The patient lay on his back with head and eyes turned to the right Both forearms, especially the left, were strongly flexed on the arms Extension of the forearms passively was difficult, and when the left was extended the patient screwed up his face as though in great pain Pricking the face with a pin caused no change in expression The lower limbs were slightly flexed at the knees but were more easily extended than the upper The man moved the right arm and both legs at times quite freely, but did not move the left arm—at least no voluntary movement of this limb was noticed The biceps and triceps reflexes were exaggerated The patellar reflexes were not obtained, probably because of the spasticity Plantar stimulation gave plantar flexion

Symmetrical areas of softening were found in the inner segments of the lenticular nuclei They were larger than in the case with a history of gas poisoning, and did not have exactly the same superior and inferior limits The small arteries in the areas of softening showed a moderate degree of calcification but corpuscula arenacea or other calcium deposits were not found

Dana[7] probably was the first American writer to call attention to the bilateral softening of the lenticular nucleus in gas-poisoning The cases described in our report are especially interesting in connection with the extraordinary cases of progressive degeneration of the lenticular nucleus of the family form, described by S A K Wilson[8] It appears that when the lesions are confined to the lenticular nuclei intense spasticity is produced with apparent paralysis, but power of voluntary motion is really retained, although all movements are awkward and are of less power

I am indebted to Dr A J Smith for the photographs

701 North Fortieth Street—2040 Chestnut Street

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[6] Wells, H Gideon Chemical Pathology, W B Saunders Co, 1907

[7] Dana Jour Nerv and Ment Dis 1908 p 65

[8] Wilson S A K Rev Neurol, Feb 29, 1912, p 220, Brain, 1912 xxxiv

SAFETY-RAZOR-BLADE SCALPEL

JOHN B MURPHY, A.B, M.D, LL.D
CHICAGO

Every surgeon has more or less often been annoyed by a dull scalpel when a sharp one was very much desired. Furthermore, after a few strokes of the scalpel, especially when made in a firm or resistant tissue, like an old scar, the cutting edge of the scalpel becomes dulled Sharpening scalpels is a nuisance and at best very unsatisfactory In order to overcome these objections, I have devised some handles to carry the two types of safety razor blades most commonly used After these blades are no longer serviceable for the purpose for which they were intended, they make excellent scalpels They are cheap and easily obtainable

The accompanying illustrations are self explanatory The ordinary scalpel handle is provided with two arms, united above but not below, between which the knife blade is inserted To carry the double edged blade, one arm is provided with two stubs which fit into the two perforations in the blade, so as to hold the blade firmly, and a thumb ratchet locks the arms, thus making a splendid, double edged cutting instrument (Figs 1 and 2, *A*)

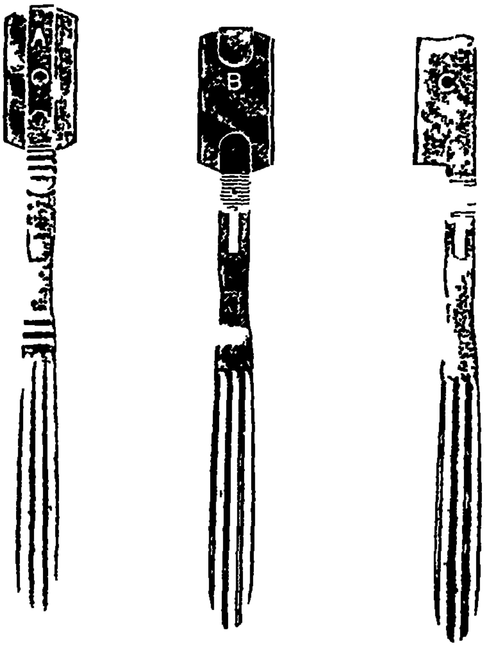


Fig 1—Three styles of handles *A* is used for a double cutting-edged blade *B* is provided with the flange which is visible on the right hand edge of the blade *C* is the single cutting-edged razor blade handle.

A second type of handle has the carrying arm provided with a broad flange which protects one cutting edge so that a single cutting edged instrument, like the ordinary scalpel, is obtained This scalpel handle has only one arm, which is turned down over the blade on top The thumb ratchet when pushed up secures the blade below (Figs 1 and 2, *B*)

The third type of handle is intended to carry a single cutting edged blade, like the auto strap razor blade It is constructed like the second style of handle except that it has no flange on the carrying arms and is not provided with stubs, this blade having no perforations (Figs 1 and 2, *C*)

I have used these scalpels for some time in all my work and have found them very serviceable and satisfactory

104 South Michigan Avenue.

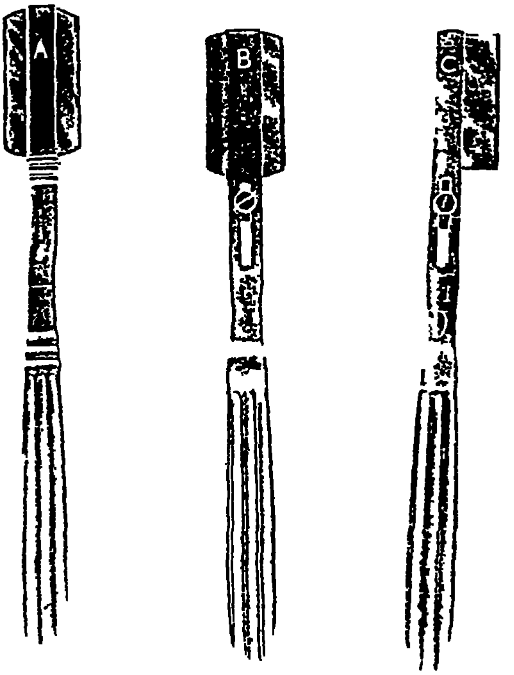
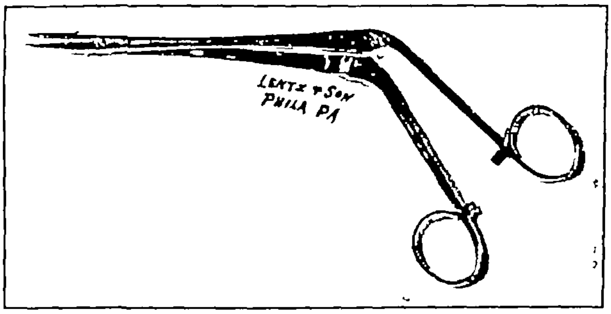


Fig. 2—Reverse of the three handles The flange on *B* is now seen covering the left half of the blade.

CLEFT PALATE NEEDLE-HOLDER

GEORGE M. TODD, M.D
Visiting Surgeon St. Vincent s Hospital
TOLEDO, OHIO

Much of the difficulty of placing sutures in cleft palate operations may be obviated by the use of this special needle holder In operating with the child in the head down position, using the ordinary needle holder, vision is obscured by the hand being between the field of operation and the eye By the use of a needle holder constructed with the hand portion at an obtuse angle, as shown in the illustration, this difficulty is overcome. The surface of the palate is plainly in sight at all times, and the sutures are readily placed in position.



Cleft palate needle-holder

The holder, in addition to its angular shape, has a notch on one blade into which the other blade passes when the holder is closed This prevents any [illegible] and secures firmness The needle bite is small, [illegible] work intended [illegible] the size of the needle [illegible] a catch finger holds to fasten the [illegible]

316 Colton Building

AVERAGES IN ATTITUDE AND TRUNK DEVELOPMENT IN WOMEN AND THEIR RELATION TO PAIN*

ROBERT L DICKINSON, MD
AND
WALTER TRUSLOW, MD
BROOKLYN

PART I THE MECHANISM OF THREE TYPES OF POSTURE, VIEWED FROM THE SIDE, BY DR TRUSLOW

Three types of posture, varying according to differing anteroposterior relationships, are here named and discussed (1) "kangaroo" type, (2) normal or neutral type, and (3) "gorilla" type

Distinguishing features of the normal type are (1) the line of gravity of the body passes through important pivotal points, (2) the pelvis is balanced in equilibrium on the heads of the femora, its position being indicated by the angle which the plane of its inlet makes with the horizon, (3) this relation of important pivotal points with the line of gravity and this balance of the pelvis insure an easy balance of all superimposed structures of the body, including the spine in its physiologic curves, (4) the rear perpendicular touches two points, the shoulders and the buttocks (Fig 1)

The carefully balanced segments of the body are retained in position by nicely balanced muscle forces In this normal position, the internal organs of the trunk are placed in proper anatomic relation to each other The position therefore conduces to normal visceral activity

Anteroposterior deviations from the well-balanced position of the normal type tend toward (1) mechanical instability, (2) muscle and ligament strain and pain, and bone deformity, (3) abnormal relationship of the viscera of the trunk and therefore toward derangement of their function

These deviations mainly tend toward two opposite types, which are called respectively the "kangaroo" and the "gorilla" types (Figs 2 and 3)

There are other etiologic factors, but this paper is limited to pointing out the relation of the *corset* and the relative *height of heel* to the two variants from the normal in posture

In the accompanying cuts and in the complete paper the three types are compared segment with segment, noting in each mechanical relationships, muscle and ligament equilibrium of strain, and pain and visceral relationship Treatment is outlined from the standpoints of correction by mechanical support—corsets and shoes—and by prescriptive exercises The question of other methods of treatment of the abdominal and visceral ptoses is not here discussed

The "kangaroo" type of posture conduces to strain on and pain or aching of the low back muscles, and of the muscles back of the knees and of the calves The posture favors the forward-carried abdomen and pelvis, and thus forward displacement of their viscera Sacro-iliac joint strain is not infrequent This position tends toward weakening of the long (plantar) arches, but relieves strain on the metatarsal arches of the feet

In the neutral position there is no mechanical tendency toward the abnormalities outlined Pathologic conditions may here cause, as in the other conditions they may modify, the strains elsewhere mentioned, but this posture does not cause them

The "gorilla" type of posture favors strain and pain of the upper back muscles, iliopsoas muscles or of the sacro-iliac joint structures (which may easily be mistaken for low-grade pelvic inflammation, etc) The position is very liable to cause metatarsalgia or pains

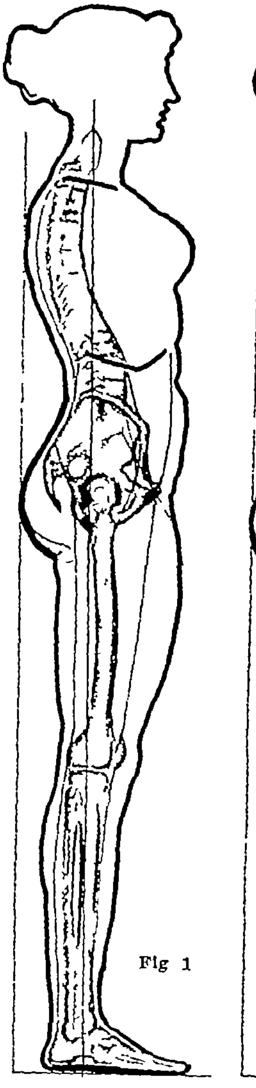


Fig 1

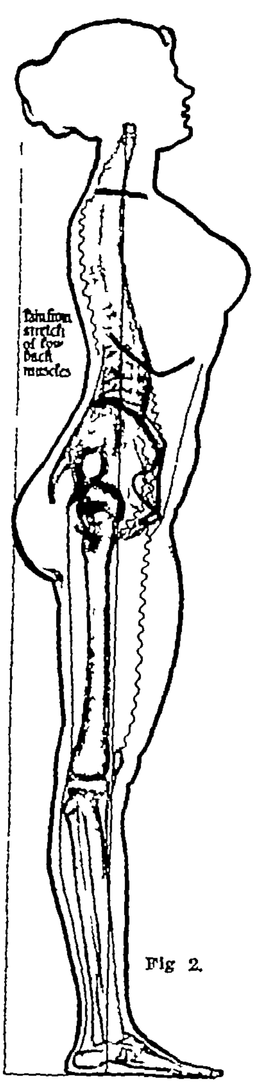


Fig 2.

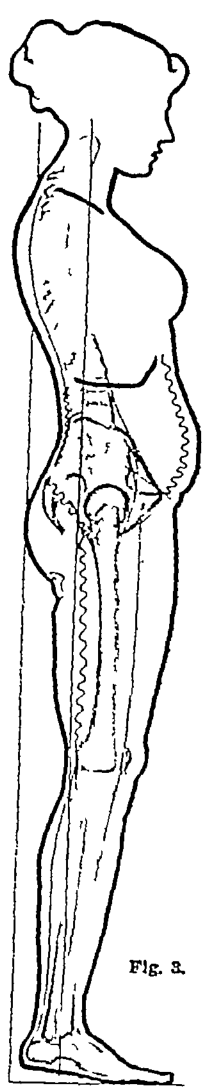


Fig. 3.

Fig 1—Normal or neutral type of posture Distinguishing features are (1) Line of gravity of body passes through important pivotal points (2) the pelvis is balanced in equilibrium on the heads of the thigh bones, (3) this relation of important pivotal points with the line of gravity and this balance of the pelvis prevents muscle and ligament strains and (4) the rear perpendicular touches the middle back and the buttocks

Fig 2—Kangaroo type of posture Distinguishing features are (1) Most pivotal structures of the trunk are carried in front of and those of the lower extremities behind the line of gravity (2) the pelvis rotates forward downward (3) the forward carried trunk puts strain on the spinal and pelvospinal ligaments and muscles and tends toward forward displacement of abdominal and pelvic viscera Wavy lines indicate muscles relaxed dot and dash lines show muscles in action

Fig 3—Gorilla type of posture Distinguishing features are (1) Most of the pivotal structures of the trunk are carried back of and those of the lower extremities in front of the line of gravity (2) the pelvis rotates backward downward (3) the backward carried trunk puts its own variety of strain on the spinal and pelvospinal ligaments and muscles and tends toward backward and downward displacement of the abdominal and pelvic viscera Wavy lines indicate muscles relaxed dot and dash lines those in action

in the fore part of the foot Especially is this the case if high heels are worn

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association at its Sixty Third Annual Session held at Atlantic City June 1912

* Because of lack of space this article is abbreviated in The Journal. The complete article appears in the Transactions of the Section and in the authors reprints

The mechanical treatment of the kangaroo type includes a corset, which shall make strong circumferential pressure on the pelvis, and shall have ascending lines which shall shift the trunk backward (Fig 4) Moderately high heels, to relieve "knee-back," may at first be worn Gymnastics must tend toward posture training and toward special development of abdominal, buttock and calf muscles For the gorilla type, the corset must have strong pelvic pressure and must have lines which shall carry the trunk forward (Fig 5) A sacral pad will help this The heels must be lowered as quickly as possible and special foot-braces, with metatarsal arch support, are often necessary The exercises aim toward posture training and toward the development of scapulovertebral, abdominal, anterior thigh, calf and toe flexor muscles

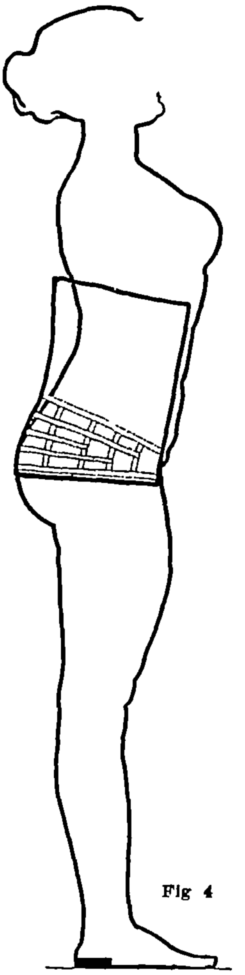


Fig 4

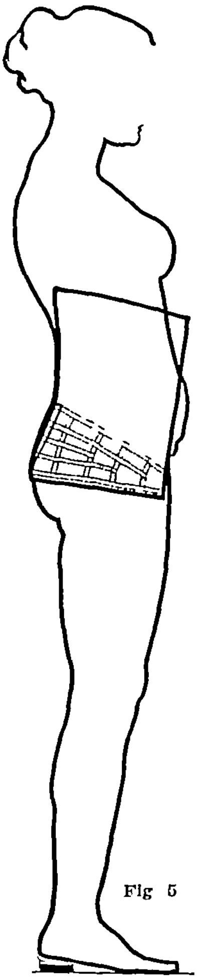


Fig 5

Fig 4 —Mechanical treatment of kangaroo type The corset is tight or even reinforced about the pelvis and its lines are such as to hold trunk backward The heels may be moderately high to relieve the strain of knee-back.

Fig 5 —Mechanical treatment of gorilla type The corset is tight about the pelvis and its lines are such as to hold the trunk forward The heels are lowered to carry knee balances backward and specially padded soles are placed under painful metatarsal arches

This preliminary study of the mechanism of three types of anteroposterior posture takes cognizance of the valuable work of Goldthwaite, Reynolds, Lovett, Dickinson, Franklin Martin and others It could well be supplemented by more in the same direction and by studies of variations from the normal, due to lack of lateral balance

In conclusion, this paper points out the mechanical instability of habitual body-carriage in front of the line of gravity and to the rear of this line, it draws particular attention to trunk, sacro-iliac, knee and foot strains, it shows the relation of corsets and of heels to these, and outlines principles of mechanical treatment by correcting corsets, proper foot support and by prescriptive exercises

PART II AVERAGES IN ATTITUDE AND TRUNK DEVELOPMENT IN WOMEN, AND THEIR RELATION TO PAIN, BY DR DICKINSON

How many clinicians strip patients standing? He who does not misses the chance to detect the source of many an ache Loath as we must always be to subject women — particularly those of sensitive English and American up-bringing — to the distress of this procedure, the time will come when no [illegible] will consider himself careful or thorough [illegible] causes of chronic pains about the [illegible] carry on

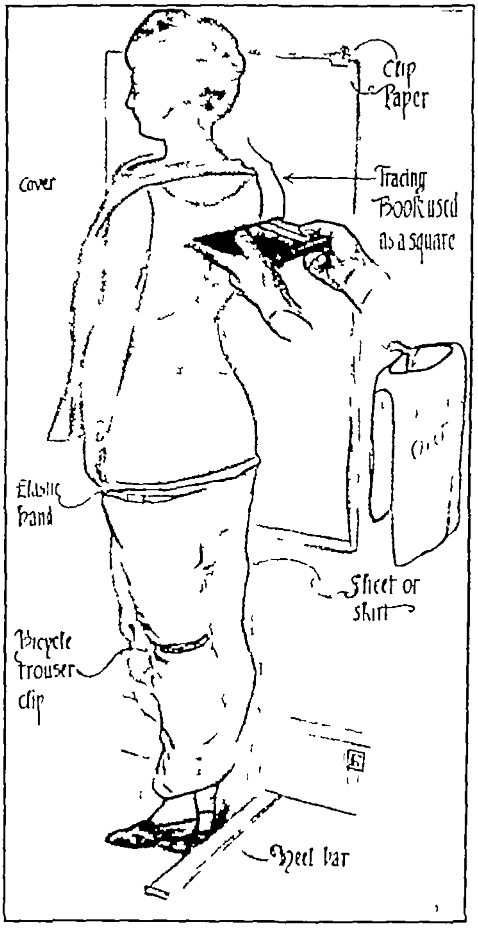


Fig 6 —Simple office method of taking outlines of the figure The subject stands against a heel bar on the floor the bar being pivoted to swing out of the way when not needed and always swinging back to the same mark The clips that hold the paper are fixtures the edge of the paper hangs to a mark on the wall or against a drawing board (which should run to the floor) In this way accurate comparisons may be made with past and future conditions because the paper will always be in the same relative position to the heel bar A narrow book that acts as a square is held in both hands in its groove a soft pencil or crayon is caught in place by elastics and with this pencil the profile is followed and the tracing made The sheet held snugly by hip garter and knee clip exhibits the knee action The whole is more exact, simple and speedy than photograph or shadow tracing

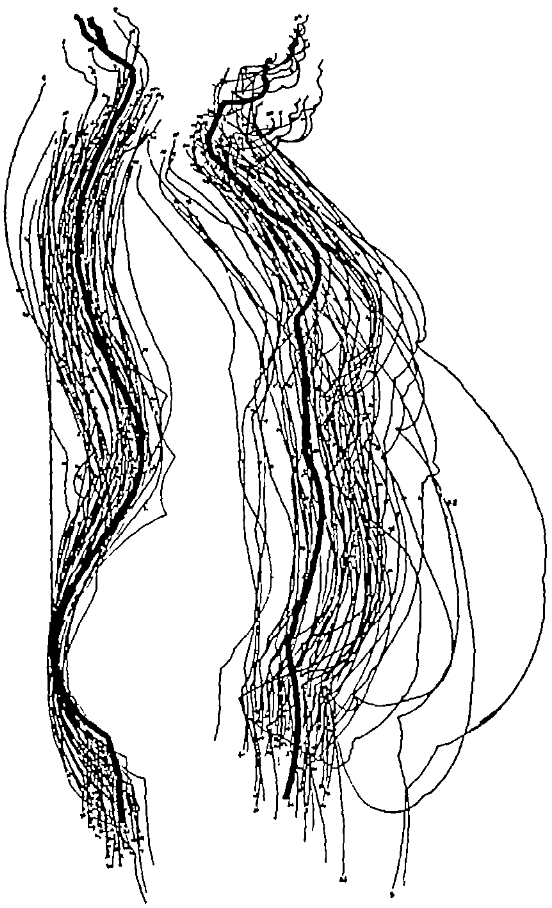
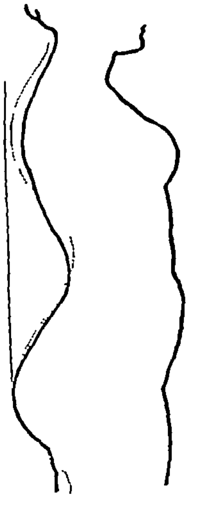


Fig 7 —A group of forty seven tracings superimposed in order to study averages and extremes The average shoulder is in fair relation to the buttock the average chin is forward breast pendant, abdomen thick prominent sagging—whether children have been borne or not—the buttock long and low Hundreds of the authors tracings multiply the same lines Heavy black line normal (antique)



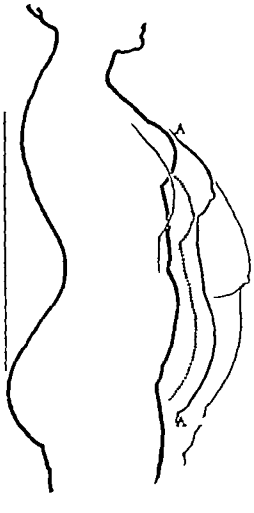
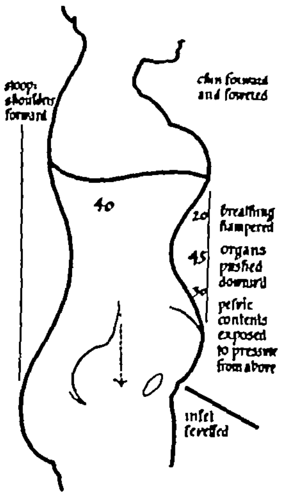


Fig 8 —While the average back in the scapular region nearly approaches the perpendicular from the buttock the droop forward of the neck brings an excessive curve in this region which produces a round shouldered effect that is a general tendency to the gorilla type of back Dotted line the average

Fig 9 —Anterior lines of the trunk The breast drags downward in nearly every instance Along the abdomen the dotted line and the heavy black line A show the most common averages according to the previous occurrence of pregnancy or not. This average anterior abdominal line which is strikingly in advance of the normal (heavy black) line shows greater prominence at its lower portion. This is the main average deformity of women.



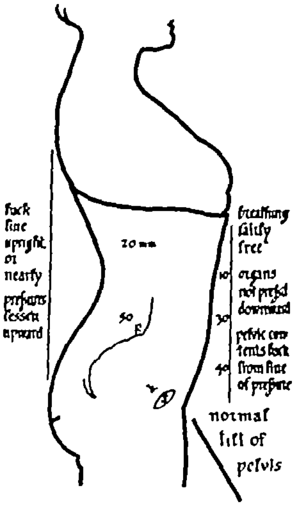
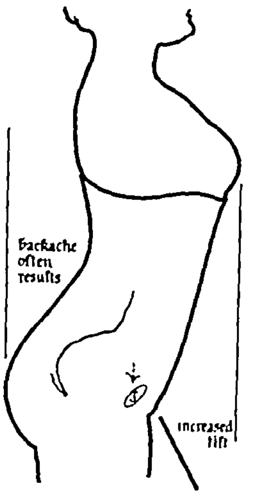

back line upright or nearly
pressure lessen upward
20 mm
50
breathing fairly free
10
organs not pushed downward
30
pelvic contents back from line of pressure
40
normal tilt of pelvis

Fig 10 —The average corset and its defects. Hour glass shape, maximum pressure at waist line, rib constriction chin and shoulders thrown forward inlet leveled Figures are mm of pressure

Fig 11 —The erect posture of the 'tolerable corset with low areas of pressure in its upper parts and good pelvic inclination



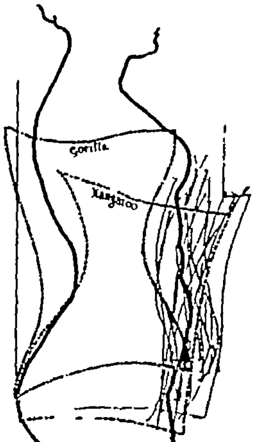
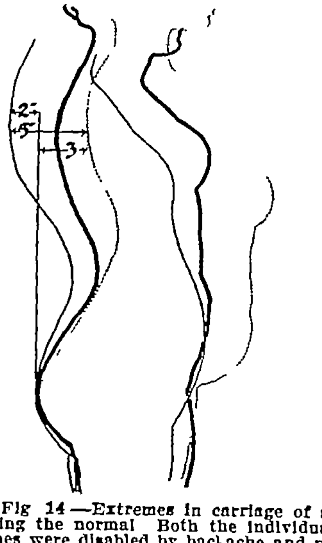


Fig 12.—'Straight front' corset tends to "kangaroo" type of carriage

Fig 13 —A group of outlines of fronts of corsets to show averages and extremes



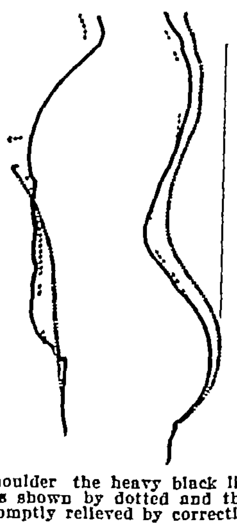
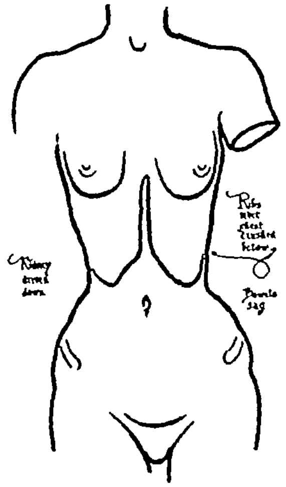


Fig 14 —Extremes in carriage of shoulder the heavy black line being the normal Both the individuals shown by dotted and thin lines were disabled by backache and promptly relieved by correction of attitude with muscle strengthening

Fig 15 —Betterment in carriage from proper corset. The black line without the fine dotted line with usual corset. The shoulders have been brought backward and the center of gravity altered by better corseting as shown by dot and dash line, the first step in the gradual process.

such observation as one of the regular details of a systematic examination[1]

The average civilized woman sags The average back is nearly upright The shoulders run only slightly toward rounding, and the chin to drooping The deformity which is practically constant is protrusion of the abdomen Relaxed from poor muscle, pushed out by low-hung inner organs, and padded with fat, mostly below the navel the anterior abdominal wall is in advance of the normal, 1 inch in a large group and 2 inches in yet another large series The breasts drag down and the buttocks sweep low Most hips and thighs show fat pads, but these, like the abdominal adipose, are local deformities and not part of a general obesity



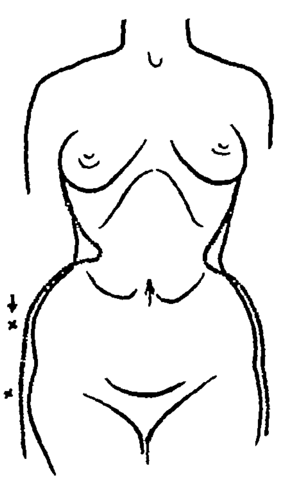


Fig 16—Congenital deformity accentuated by corsets The long trunk type suffering from constriction during period of growth The angle between the cartilages of the ribs does not admit the finger kidneys and bowels hang low

Fig 17—Hip-pad and thigh pad produced by the corset the chorus girl' figure. Extreme instance of deformity produced by hour-glass corset Between hip-pad and thigh pad the newer form of corset by its high pressure pelvic girdle, is producing a second waist line indicated on the right of this patient

Drawn from a large number of cases my tracings show not only the frequency of the defects listed above, but the persistent presence of faulty muscles all about the waist line, and a very constant narrowing of the chest and of the angle in front, between the cartilages of the ribs

Among postures, one-third were found good, one-half defective Certain types of body form are particularly susceptible to defective carriage and defective corsets, such as the individual with the long and slender trunk, and the overfeminine figure

The corset may be tolerated, except during active exercise, if neutral[2] Corsets other than harmful are not much in evidence The hourglass form, with its pressure mainly at the waist line and its downward drive, was determined to be still the average design, being found in fully two-thirds of the cases studied In one-half the cases all pressures ran high The spring or gap of the corset when unhooked — the most convenient measure of amount of constriction — should not exceed 2½ inches The tight corset harms vigorous women little, weaker women, greatly But there is no substitute for Nature's corset — the well-set-up anterior abdominal wall

The remedy lies in thoroughness in examination, particularly among women with backache and enteroptosis and neurasthenia, in muscular training continued after the year it is usually abandoned — the fifteenth — and systematically ordered after labor, and in the supervision of gymnastics and of dress

We have advocated stripping, at least to the union suit, or to the cape shown in Figure 6 To avoid delay in office work a dressing-room, however small, is desirable, to avoid criticism, a nurse or attendant is advisable, though not essential, to save disappointment, results should not be promised except in terms of months and with the understanding that defects of attitude and atrophy and pressure are but one of the causes of the ache and weakness The secret of success is persistence, and no more difficult task presents itself to the practitioner than the remodeling of the muscular habits of the flabby and obese or the self-indulgent Printed slips or typewritten sheets of instruction concerning exercise and carriage, a diary or daily notes to be submitted to the physician at stated intervals, somewhat after the manner of the sanatorium inquiry, showing what has been done daily in the number of exercises, cold sponging, and regulation of nutrition—all these are essential to results

The eye, once having been led to look for trunk defects, becomes trained to see them quickly, especially if a few of these have been traced in order to develop the powers of observation, or the office attendant may be trusted to draw attention to many of these matters It is the old question of thoroughness versus superficiality — of a patient hunt for less obvious causes

168 Clinton Street—67 Hanson Place

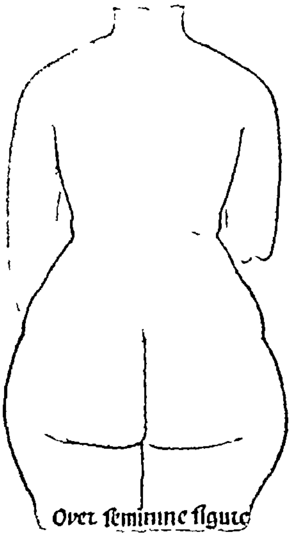


Fig 18—The overfeminine type Large hips heavily padded with small upper trunk and narrow lower chest and atrophy of back muscles causing rebellious back ache.

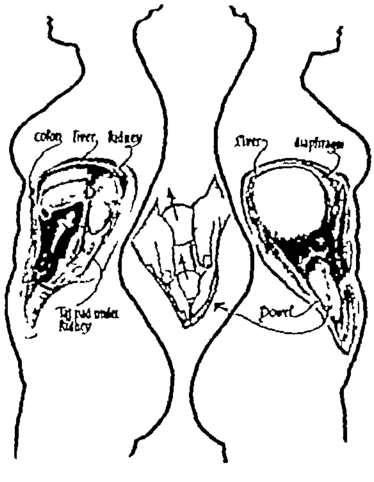


Fig 19—Only by muscular action with fascial integrity can the mobile masses in the wedge shaped cavity be held from slipping downward

ABSTRACT OF DISCUSSION

Dr Robert B Osgood, Boston The question as to whether a fairly vicious corset has any marked immediate effect on the position of the organs, especially the stomach, has interested me Two x rays of a young woman of 20, in good health and without symptoms, were taken one directly following the other after a bismuth meal, both in the stand ing position The first shows the lower border of the stomach at the level of the umbilicus The second, after putting on the corset, shows the stomach crowded upward almost 10 cm One can easily imagine the extent to which the organs below the hour glass corset constriction must be crowded down and a sagging stomach or colon be made still more ptosed and there retained. The question at once arises as to what effect attitude alone has on the causation of back pain Of 130 tracings of a college class taken alphabetically 53 per cent showed bad postures and 47 per cent neutral or good Of the faulty attitudes, 4 per cent could be classed as kangaroo and 49 per cent as gorilla The lumbar lordosis was increased in 17 6 per cent and diminished in 9 per cent and considered to be within normal limits in 73 4 per cent It would seem that faulty attitude may exist, at least for a certain time, without necessarily giving rise to subjective symptoms of pain, when we consider that while 53 per cent showed a bad position of standing only 5 per cent had pain The prevalence of faulty attitudes in women is suggested by this series In 760 cases of low back pain in the clinic of the Massachusetts General Hospital 70 per cent of patients were men Of course, some of these were traumatic but a large number were classed as attitudinal. Since so large a proportion were men, the corset alone cannot be responsible I think we must consider the exact localization of the pain in these cases of static back or postural strain as still somewhat *sub judice* That a constant strain on the lumbar muscles may induce pain referred to their insertions and attachments seems entirely rational and undoubtedly explains the pain in many cases when these faulty postures become constant There would seem also to be strain on the sacro iliac joints, pivotal as they are In women, following childbirth, we are familiar with the train of symptoms which their continued relaxation sometimes produces, and when we can appreciate tenderness to deep pressure localized over the posterior sacro iliac ligaments and can cause pain by motions which strain these joints alone, I believe we may suppose strain of these joints to be a cause of pain Certain it is that treatment directed to the protection of these joints relieves the discomfort

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[1] Such an examination is outlined in the complete article Here the illustrations and their legends must carry nearly the whole of the findings of my inquiry

[2] Dickinson Robert L. Toleration of the Corset Prescribing When We Cannot Proscribe Am Jour Obst June 1911

AFTER-RESULTS IN TUBERCULOUS PATIENTS TREATED DURING THE YEARS 1891-1911 AT THE SHARON SANATORIUM *

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BOSTON
AND
WALTER A GRIFFIN, M D
SHARON, MASS

This paper is the result of an investigation of the present condition of patients discharged from the Sharon Sanatorium from the time of its foundation in 1891 to Jan 1, 1911, that is, no patient will be reported who has not been away from the sanatorium at least one year

In the nineteen years thus covered 592 patients have been discharged Of these, twenty-two stayed so short a time that they were considered not treated Nine others were admitted for some other complaint than tuberculosis of the lungs Twenty-four did not react to tuberculin and were termed merely suspected cases Seventeen in the early years of the sanatorium were discharged as well, this term being used, it may be, because at that time there had been no definite rules formulated by a nomenclature committee These seventeen patients also are not considered in this report, since in practically all instances they were admitted with the diagnosis of phthisis questioned, or as having bronchitis, and received no tuberculin test This leaves 520 patients, of whom forty-eight were discharged as "not improved," 175 as "improved" and 297 with the disease "arrested" or "apparently cured"

Of the forty-eight non-improved, all died as might be expected, a mortality of 100 per cent Of the 175 discharged as improved, 107, or 60 per cent, died, in fifty-one, or 29 per cent, the condition is reported good, and seventeen, or 9 per cent, have not been traced Some of the improved patients have continued in a very gratifying condition of health, and frequently they have arrested their disease and have taken up their life-work again The following history is fairly typical

Case 190 —This patient, without any family taint of tuberculosis or previous severe illness, had had a cough for a year following an acute cold She presented on examination well marked dulness with harsh respiration at both apices, especially the left Numerous fine and medium moist râles were present over the upper half of the left side front and back and at the extreme lower base The sputa showed tubercle bacilli The patient stayed ten months in the sanatorium and has remained in excellent condition for ten years except for an attack of appendicitis which required operation She was a professional singer and has taken up her work again, holding a position in a large city church

In 1902 a report was made of seventy-nine patients with arrested cases treated at Sharon Sanatorium[1] Of these, six, or 7 5 per cent, have not been heard from recently, and twenty-two, or 26 5 per cent, have been reported as dead This leaves at least 66 per cent of this series of patients still living after ten years, and perhaps a higher percentage, if some of the six who have not been heard from could have been reached Practically all of the 66 per cent report that they are in good physical condition, and many of them are wage-earners The following case may be cited in illustration

Case 49 —Two brothers and two sisters of this patient died of consumption Two months before entrance she had a sudden hemoptysis of fairly large proportion Examination showed dulness in the middle of the right back with fine râles Tubercle bacilli were numerous in the sputa The patient was discharged in 1894, seventeen years ago, and has remained well although her work has been hard as a domestic in Boston, until about a year ago when she married and returned to her old home in Ireland

As before stated, we have at this time 297 arrested and apparently cured cases to report All which received the latter term (forty-four) would have been considered arrested cases according to the previous method of tabulation, and for the purpose of this paper we shall consider them as arrested cases From this point of view it is only fair to say, however, that "arrested" used to mean more to us than the present use of the term allows, for if tubercle bacilli were present at the time the patient was discharged, the term "improved" was formerly the most favorable one used On the other hand, in the early years of the sanatorium a case was frequently called "arrested" after a shorter period of residence, even though at times only a little over a month had elapsed Such patients had lost cough and expectoration, if any, almost immediately after entrance They had learned the regimen of the sanatorium and had good home environments In practically all such instances the after-results have justified the expectation expressed by the term According to the present nomenclature, however, certain patients have gone out as "improved" because of residence limited to less than two months Numerically, such cases have been as many as those which, with tubercle bacilli still persistent at time of discharge have been called "arrested," according to the present use of the term, so that for the purposes of comparison with previous reports we have counted together the cases of arrest and apparent cure and called them arrested

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* Read at the Annual Meeting of the American Climatological Association at Hartford, Conn., June 1912.

[1] Tr Am Clim Assn 1903, p 64

Of the 297 cases so classed, twenty-five, or 8 per cent, have not been traced, and thirty-five patients, or 10 per cent, have died, leaving 237 patients, or 81 per cent., known to be alive and for the most part in excellent health

In arriving at a diagnosis nearly all patients since 1902 who have not shown tubercle bacilli in the sputa have been tested with tuberculin before being pronounced tuberculous This has been done to avoid the criticism which could be advanced with some justice that occasionally patients without tuberculosis might have been discharged, thus bettering the reported results of the sanatorium Each year there are three or four who are sent out as "suspected" cases, but without taint of tuberculosis as ascertained by the test It might be said, however, that all of these could at least be classed under the frequently heard but erroneous term "pretuberculous," that is to say, these patients are always debilitated and in a condition to be attacked by disease The sanatorium care and regimen is therefore a good thing, for it teaches such patients how to care for their physical condition so that they are not so liable to any disease

In our opinion the administration of the tuberculin test is not to be lightly undertaken We remember one rather harrowing experience which it may prove of interest to recount

Case 206 —Two years before entrance, this patient had a cough for about three months She afterward began training as a nurse and the chest was examined by chance by one of the visiting physicians, although there were no symptoms referable to the chest at that time. She had dulness over the upper half of the right lung and medium and fine râles all over this side As there was no sputum for examination, she was given 0 002 gm tuberculin about two weeks after entrance This caused a slight reaction, and as the patient seemed all right she was allowed to stay up the next day The temperature, however, went up a little on that day and the two days following The patient was again put to bed and was kept there for nearly eight weeks before she could be safely allowed about A part of this time the temperature varied between 100 and 103 at night, and cough, which had been absent up to this time, became troublesome, the sputa containing many tubercle bacilli. This upset naturally worried us a good deal, but on further investigation it was found that on the two or three days after the test the patient overexerted herself walking, so that the upset was ascribed to this as much as to the tuberculin After discharge this patient again took up nursing and remained in good condition for several years She finally died of an acute hemorrhage nine years after discharge

Since this case we have been more hesitant in applying the test to patients who present signs of persistent active catarrh in the lungs, and one or two instances usually occur each year in which we consider a patient to be tuberculous because of the history and certain suspicious signs in the chest even though no tubercle bacilli are found and no tuberculin is given The following would be a rather typical case of this sort

Case 532 —The father and mother of the patient had died of tuberculosis about one and one half years before the patient's entrance The patient had had what was called 'grip" with occasional cough Recently there had been no cough or expectoration The chest showed marked dulness over the upper half of the right side and at the apex on the left Breathing was harsh on the right and the voice was bronchophonic Medium and fine râles were heard in plenty over the dull areas The throat showed general congestion with a small ulceration on the left, the true vocal cord and both false cords were red and swollen The patient had been hoarse for a year At no time was any sputum available for examination Such a case certainly needed no tuberculin to prove that treatment was necessary, and the administration of a test dose might have had disastrous results

In obtaining the results nothing new or original has been used in treatment The trinity of fresh air, good food and rest have been the main reliance About four years ago an experiment was made with a sleeping-out balcony The five patients who were on this balcony did so well and were so enthusiastic that other balconies were made, until now every room has a large door through which the bed may be wheeled on to a veranda All the patients favor sleeping out and if, for any reason, the weather forces them to remain with half the doors closed there is a general complaint of stuffiness and lack of air, even though under such circumstances there is better ventilation than in any ordinary room We have concluded, therefore that even though we cannot say in any individual case that the patient is better for sleeping out, still we feel that, all things considered, the condition of patients is so much bettered that the expense of making the balconies has been justified

In forty-two cases tuberculin has been used therapeutically For the most part these were not especially favorable cases, in fact, nearly half (nineteen) were considered moderately advanced and there were only four patients who were free from tubercle bacilli in the sputa Of these four the signs in two extended over more than half of each lung One of the others, who had a history of hemoptysis, had definite signs in one lung which have persisted to the present. The other patient had a tuberculin reaction and was given treatment because her home environment was poor and it was desired to give her as much resistance as possible Seven of the forty-two patients have died Four of these were treated in the first years of our use of tuberculin and would not at present have been chosen for such treatment, since they were evidently fast failing, and showed elevation of temperature and rapid inroads of disease Another of the seven who have died wore herself out needlessly by too much traveling contrary to advice, and one had a sudden hemoptysis One patient who had tuberculin treatment has not been traced This leaves thirty-four of the forty-two cases, or 83 per cent, in good condition This seems to us a good showing, considering the relatively poor condition of many of the cases, and we therefore favor the use of tuberculin in cases of open tuberculosis without fever and, theoretically at least, we believe that it is indicated in closed cases as a means of conferring something of an active immunity Before leaving this phase of the subject it would perhaps be of interest to touch on the history of the first patient who received the treatment at the sanatorium and who has done so well for eight years that we have at times felt like giving tuberculin to all patients as a routine

Case 243 —This patient was first admitted April 20 1903 There were well marked signs all over the left side of the chest and at the top of the right side The sputa contained many tubercle bacilli With ordinary sanatorium treatment the cough and expectoration ceased and she was discharged at the end of eight months Within six months the patient was back again with a renewal of all the old symptoms With the same treatment she [illegible] d [illegible] she gained a little in the next five mo[illegible] of radi ment. Finally she was given tuberculin over a period of five months in doses ranging from 0 0005 gm to 0 6 gm At first the cough and expectoration increased, but soon the condition began to improve and for more than a month before the patient was discharged the symptoms were entirely absent and the physical signs showed much improvement After discharge she worked for a time in a bleachery without breaking down, at present she is a waitress in a summer hotel and reports that her health is excellent, eight years after the use of tuberculin

In considering again the results of treatment in this series of cases, one cannot but be impressed with the after-condition of the arrested cases as compared with that of the improved cases—health being reported good in 81 per cent of the former and in only 29 per cent of the latter The oft-repeated moral is again brought forcibly to mind by these figures, that in order to give patients the best chance for recovery and for subsequent usefulness in life, they should be treated at an early stage while yet the disease may be arrested We have learned that patients are practically never cured during residence at a sanatorium, they are merely started in the right direction It is fairest to them, therefore, to begin treatment at a stage when they may be given the best chance to regain health

In reviewing the work accomplished in the last twenty years, we feel that our attitude has been one of conservatism in regard to the results obtained When one reflects on the condition of affairs in the treatment of tuberculosis twenty or twenty-five years ago, and recalls the sense of hopelessness that was felt whenever a patient presented himself with symptoms of pulmonary disease, especially among the less favored classes, we feel that we are justified in looking with great satisfaction—even enthusiasm—on the work of twenty years at the sanatorium

It is often impossible to impress on others by figures alone facts which through long years of experience stand as positive proofs to us of what we wished to obtain It was never believed or even hoped that sanatorium treatment alone would eradicate tuberculosis, but it did not take long to convince us that it was a great step in the right direction and that infinitely more could be done than heretofore to bring people back to health, even under what had been considered in former years most unfavorable conditions

In stating our results, it must be remembered, too, that in using the term "arrested" we have applied it to the results obtained in many cases in which at the beginning of treatment the physical signs and symptoms of disease were well marked, and in spite of which condition a successful result was often obtained for a number of years The surprising part has often been that such patients have remained so long without relapse on resuming the ordinary conditions of life

To those who have been closely connected with the work, the fact that has been of far greater influence than the mere collection of figures, although these themselves have given us the greatest satisfaction and more than we had dared hope for in former years, are the faces and general aspect of patients who on reunion days at the sanatorium appear to give their tribute of gratitude for help which they have received in former years The evidence that these persons give, not only of the good done to themselves, but of their influence on others in teaching methods which tend to prevent disease, is the most gratifying part of all our work

We have no sympathy with the attitude, which happily is now lessened, that because sanatorium treatment has not proved to be a panacea it has therefore failed in its purpose On the contrary, with greater confidence than ever before, we feel it to be one of the great and *important factors to be resorted to in conjunction with* every other known method of combating the disease which still holds the highest place in the mortality list of the civilized world

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THE ETIOLOGY OF BERIBERI

CARL LOVELACE, M D
PORTO VELHO, BRAZIL

In The Journal, some time ago, there appeared an editorial comment[1] on the sanitary work incident to the construction of the Madeira-Mamoré Railway, in the states of Amazonas and Matto Grosso, Brazil I take it, therefore, that a brief description of this work would be deemed of interest to physicians For this reason, and in order to give a side-light on my subsequent remarks, I venture to prefix my observations on peripheral neuritis in Brazil, with the following

THE MADEIRA-MAMORÉ RAILWAY

The Madeira-Mamoré Railway is 227 miles long It extends from the head of navigation on the Madeira River southward and upward to the navigable waters of the Mamoré River—from Porto Velho de Santo Antonio to Guajara-Mirim Except for the improvements made by the company, both of these formidable names locate mere spots in the Brazilian jungle The first train over the whole line was run on April 30, 1912

Porto Velho is situated in south latitude 8° 45′, is 300 feet above sea-level, has a rainfall of 90 inches per year, and a temperature range from 56 F in the cool June nights to 102 F in the hot September days It is on the right bank of the Madeira River, which at this point has an annual rise and fall of 45 feet The annual volume of water discharged by this river is about the same as that of the Mississippi Boats drawing 8 feet of water ply on it all the year, and ocean-going vessels of *7,000 tons come to Porto Velho every year during the* period of high water, from December to May

Three previous attempts to build this railroad were unsuccessful, because of the terrible rates of sickness and death among those concerned Mr Neville B Craig[2] has written a most entertaining volume describing one of these melancholy failures

WORK OF AMERICAN PHYSICIANS

The sanitary branch of this work has from the beginning, *in 1907, been under the direction of American* physicians employed by the contractors In 1910, Dr Oswaldo Cruz, Brazil's foremost sanitarian, visited Porto Velho, sojourned here three weeks, approved the work then being done, and urged the compulsory administration of daily prophylactic doses of quinin to all employees not protected by screened houses In a non-military organization this has been found impossible to carry out perfectly, but even its partial enforcement has been of untold benefit Without the powerful influence and personality of Dr Cruz the liberty-loving Brazilians would have rebelled against this regulation

In 1911 the number of employees was about 5 000 comprising, approximately 250 North Americans 2,000 Brazilians, 1,000 Spaniards, 750 Greeks and 1,000 others, representing practically every country in the world The number of physicians at this time was nineteen of whom eighteen were Americans In all, forty physicians have been employed, of whom thirty-six were American, two Brazilian, one Spanish and one English

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[1] Sanitary Work in Brazil Good Health a Commercial Asset, The Journal A. M A. Sept 24 1910 p 1120

[2]. Craig Neville B Recollections of an Ill Fated Expedition

The sanitary measures adopted have consisted in the provision of screened houses for all employees of the higher grades, in antimosquito campaigns in and about the permanent camps, that is, camps destined to become towns, in the compulsory, prophylactic administration of quinin to employees, in the regulation of food and water-supply, in the usual measures against the so-called quarantinable diseases, in attention to disposal of garbage and sewage, and, finally, in the prompt hospitalization of all except slight cases of illness

The nearest city and base of supplies is Manaos, where, for many years, yellow fever has been rampant On seventeen occasions cases of yellow fever have been brought to Porto Velho by the river boats, and last year a number of employees contracted the disease at the old town of Santo Antonio, 3 miles from Porto Velho We have been able to prevent the disease from getting a foothold anywhere on our line of work, only three cases having occurred in which the infection did not originate outside of our zone

Malaria, yellow fever, blackwater fever, bacillary dysentery and beriberi are the chief tropical diseases with which we have to contend We have had one rather sharp outbreak of typhoid fever, and lobar pneumonia has killed more than 200 of our employees The hospital consists of six detached wards with a normal capacity of 250 beds, an operating-room, a clinical laboratory, a post-mortem room and the necessary out-buildings We do autopsies on the bodies of all persons dying in the hospital The material is only too plentiful In addition to our employees, we receive a number of patients from among the *seringueros* for hundreds of miles around From Jan 1, 1908, to Jan 1, 1912 there were admitted to the hospital of this company 30,430 patients

DESCRIPTION OF A FORM OF PERIPHERAL NEURITIS

Among the 30,430 admissions to the hospital of the Madeira-Mamoré Railway between Jan 1, 1908, and Jan 1, 1912, the diagnosis of beriberi or of "polyneuritis" or of "multiple neuritis" was made 963 times The affection is known locally as *polynevritis,* and following the teaching of the celebrated Brazilian physician, da Silva Lima, a goodly portion—in North Brazil, a majority—of the profession affix the word *palustre* They regard the affection as a multiple peripheral neuritis incident to malarial infection Oswaldo Cruz himself shared this opinion until his visit to this hospital in the summer of 1910

Symptoms—Few diseases present such a variety of clinical aspects The onset may be sudden, the course swift and tragic We have a number of charts of intelligent patients with clear histories, in whom the duration of the disease from its very first symptom up to death by cardiac dilatation occupied less than one week On the other hand the onset may be so gradual and the symptoms so poorly defined that the disease is well advanced before the patient seeks relief Some recover in a few days, others are bedridden for months Some are waterlogged from the beginning, in others there is little or no edema In some the affection throughout seems to be entirely cardiac in others the heart appears to be absolutely unaffected even though the paralysis be extreme The deep reflexes may be lost as a first manifestation of the disease, quite frequently they are markedly exaggerated not only in the beginning of the disease, but also throughout its course and immediately before its fatal end They may be exaggerated to-day, and absent a week from to day

Sometimes the pain, particularly in the legs, is excruciating, more often the legs feel dead with vague, slight pains, or the "pin-and-needle" sensation A patient may enter the hospital to-day with no symptoms save the subjective ones of pains in his legs, and in forty-eight hours have become so edematous as to be almost unrecognizable The pain may be chiefly substernal, or in the thighs, or in the forearms It may be entirely absent

Death may come with dyspnea, cyanosis and a feeble, fluttering pulse, while the patient seems yet robust or it may come as a terminal dysentery or pneumonia after he has been exhausted by many weeks of suffering

Clinical Classification—What one may take as the type of our patients presents himself for treatment complaining that his legs are swollen and that his calves are sore and painful One finds on examination a rapid heart frequently with the pauses equal, and sometimes with a reduplication of the second sound over the pulmonic area, edema of the legs of maximum intensity over the pretibial area, knee-jerks usually exaggerated, but frequently lost, and areas of tenderness on the legs, giving rise to the "stiff" gait, with or without areas of anesthesia and of paresthesia Fully three-fourths of our cases present these symptoms and these alone The tachycardia may be slight and may not be noted unless one makes the patient walk about The arhythmia may be absent Edema is present at some time in perhaps 90 per cent of all cases Pain in the legs, especially the calves, and in the thighs, particularly along their internal and posterior aspects, is also a fairly constant feature

Patients of this group—and it comprises 75 per cent of the total—usually recover on being put to bed and given an easily digestible diet, with treatment of any associated malady as malaria or uncinariasis A few, however, grow progressively worse in spite of any and all treatment

The severe cases fall into two groups (1) those in which symptoms, apparently cardiovascular, dominate the situation, and (2) those in which paralysis of various groups of muscles, with pain and tenderness along the nerve trunks, is the characteristic feature To the former of these two groups belong the acute pernicious cases characterized usually by anasarca and a rapidly developing dyspnea, cyanosis and death

Any case may at any time develop these pernicious symptoms Even in these fatal cases the edema may be slight Sometimes the patient dies suddenly of heart failure after he has so far recovered, apparently, as to have been allowed to sit up

A striking and cheering feature of a proportion of this group is the rapid recovery which begins on the institution of rest in bed and good nursing

Our severe cases of the paralytic or atrophic type fall clinically, also, into two classes (a) a smaller group with a rapid onset of paraplegia, and (b) a larger group characterized by the slow development of paralysis, by some sensory disturbances and by extreme chronicity These are the cases which accumulate in our wards and overcrowd them, unless they are invalided away

A man may walk into the hospital with a mild tertian infection, which yields promptly to quinin He has experienced nothing beyond the usual phenomena of a malarial attack, save, perhaps, unwonted feeling of weakness in his legs. He is surprised to find that after the subsidence of the fever, his legs become weaker instead of stronger, until in a few days or weeks he is unable to stand. His heart may apparently be unaffected. He has no pain. The blood and urine are negative. Usually, but not always, there is edema of the legs. The knee-jerks are lost, or, without any coexisting malaria, these phenomena may develop within a very few days. The frequent association of malaria with this form of the disease has done much to hang the whole beriberi symptom-complex on the malaria peg in the minds of those whose work has been confined to regions where both affections are rife.

The second group of the severe cases with slight cardiac involvement corresponds exactly to the picture conjured up by the words "multiple peripheral neuritis." If these patients are able to walk the diagnosis may be made at long range. If they are bedridden the most cursory examination will suffice. All the dear old text-book descriptions here come into their own: the "steppage" gait, the lost tendon reflexes, foot-drop, wrist-drop, atrophied muscles, areas of anesthesia, areas of hyperesthesia, areas of paresthesia—all the well-beloved phrases troop gallantly to service and describe with precision the unfortunate patient.

Mortality.—Of 797 patients admitted to the Candelaria Hospital during the years 1910 and 1911, 120 died—a mortality of 15.6 per cent. The mortality varies in a most extraordinary manner. Sometimes it will be not more than 2 or 3 per cent. for months, and then a time will come when half the patients die.

Pathology.—No one feature of the gross pathology as seen at our autopsies is characteristic. Atrophy of the skeletal muscles is sometimes present. In the acute cases it is absent. Dilatation of the right ventricle is almost invariably present. The left ventricle may be dilated. In old cases there is hypertrophy of the right ventricle. Pericardial effusion is fairly constant. The other serous cavities usually contain more or less fluid, and at times the whole cadaver is water logged. The kidneys may be congested, but there is no nephritis. The cardiac cases that have dragged on for some time may show chronic passive congestion of the liver.

Our attempts to estimate duodenal congestion have been unsatisfactory. The paraplegic cases seldom come to autopsy unless a terminal affection—notably bacillary dysentery—sets in. Signs of chronic malarial infection are, in this region, frequently present as a matter of course. No attempts to demonstrate degeneration of the peripheral nerves have been made.

EVIDENCE THAT THIS AFFECTION IS BERIBERI

In writing the foregoing I have sought to describe what I see here. I believe that I have presented a clinical entity which must be classified as beriberi. At any rate it constitutes my first proposition, namely, that this affection is beriberi. To the above one might add abundant historical evidence — if libraries occurred in the Brazilian forest. Leopold[3] referred to north Brazil as "the fatherland of the disease" [beriberi]. Bondurant[3] of Mobile, mentions Brazil first in his list of countries where beriberi prevails. Manson[4] speaks of the "epidemic wave" of the disease which passed over Brazil in the early sixties. Castellani and Chalmers[5] refer to Brazil as a place where beriberi is said to occur. Herzog[6] mentions the occurrence of beriberi on the Atlantic coast of South America and particularly in Brazil. Osler[7] has seen cases of beriberi from Brazil. Magalhães[8] wrote an exhaustive monograph on the cardiac phenomena of cases studied in Rio Janeiro.

RICE NOT A FACTOR

My second proposition is that this affection as it occurs in Brazil is not etiologically related to a diet of polished rice. To posit this negation requires some temerity on the part of a mere clinician, after reading the papers of Fraser and Stanton,[9] and many references to the work of Chamberlain and Vedder,[10] Heiser and others in the Philippines. I do it because I have seen some patients with beriberi whose diet was varied and abundant — who had not eaten a grain of rice for many months before the onset of the disease, a large number of patients with beriberi, who, enjoying a liberal, protein-abounding diet, had eaten it only occasionally throughout their lives, and a great number of sufferers from the disease, in whose diet it could not be considered the staple article. Of the latter class I have seen a goodly number who for months before the onset of the disease had had rice excluded from their diet.

Unlike the Oriental, the South American, by nativity or adoption is a meat-eater. He eats the European breakfast but he eats two full meals every day and partakes liberally of meat at both. Beans, which are supposed to have a therapeutic value in the treatment of beriberi in the East, are staple articles of diet throughout North Brazil. They abound on the tables of the poorer classes. *Feijoada,* a compound of bacon, red beans and dried beef, lightly touched with garlic and bathed in its own gravy is the dish universal among the poor, and not despised by the wealthy. The bean with meat is the staple article of food of the Brazilian peasant. Rice and *farinha* (cassava) and bananas are side dishes. It must be admitted that the Brazilian laborer eats some rice practically every day, and that the incidence of beriberi is perhaps highest in his class, but the same line of reasoning would incriminate polished rice as a causal factor in lobar pneumonia, malaria, uncinariasis and gonorrhea. Among our Brazilian employees lobar pneumonia is twenty times more frequent, relatively, than it is among our American employees.

In December, 1909, alarmed at the increase of beriberi among our employees of all classes, we caused rice to be eliminated from all company messes and removed from all the commissaries. In lieu of rice we furnished macaroni. The staple foodstuffs of the laborers were made to consist of dry biscuit, meat (dried and tinned meat and codfish), beans and macaroni instead of dry biscuit, meat, beans and rice. Conditions along the line of work were such that a large majority of the laborers were deprived of rice. The men who boarded at the company's messes ate no rice at all. The beriberi rate climbed steadily throughout the year 1910, and dropped abruptly at the end of the year exactly as it had done in 1909. In 1910 on a comparatively rice-free diet, there was relatively three times as much beriberi among our employees as there was in 1911, during which year all the messes and all the commissaries of the company served and sold rice freely. The rice has always been the same kind — white, polished rice.

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[3] Sajous: Cyclopedia of Medicine, i.

[4] Manson: Tropical Diseases.

[5] Castellani and Chalmers: Manual of Tropical Medicine.

[6] Herzog: Osler's Modern Medicine, iii.

[7] Osler: Practice of Medicine.

[8] Magalhães: O Coração no Beriberi.

[9] Fraser and Stanton: Jour. Trop. Med. and Hyg., Nov. 5, 1911, et seq.

[10] Chamberlain and Vedder: Philippine Jour. Sc., November, 1911.

One of our American physicians, who did not eat a grain of rice while in Brazil and who purposely refrained from eating it because of its supposed association with beriberi, contracted the disease after about ten months' service here and was invalided home Three other members of our staff, who lived at headquarters and who ate rice only occasionally, certainly not more than once a week, were invalided home with the diagnosis in both cases of beriberi One of these men ate at the table of the chief engineer, the other two lived at this hospital At neither table did rice appear except occasionally Two other physicians stationed in the camps contracted the disease and were invalided home Because one of these physicians had malarial parasites in his blood, when he got home, his affection was there diagnosed as "malarial neuritis" In all, six physicians have contracted the disease here — six healthy, young adults who lived on a full protein-rich diet

The incidence of the disease among physicians has been greater than among any other class except the Brazilian laborers Does not this fact alone speak volumes?

In 1910 out of a total of 690 admissions to the first-class ward of this hospital, there were twenty-four cases of beriberi Many of these patients came here and were invalided back to the United States during the time that rice was prohibited They did not eat a grain of rice They were clerks, mechanics, camp foremen, timekeepers, etc Their diet here would not have suffered, in comparison, as to quality, quantity and variety, with the diet of persons similarly employed anywhere in the United States Fresh meat, onions, potatoes and an abundant supply of the best American tinned meats, fruits and vegetables were supplied in lavish profusion, in addition to the bacon and beans which have belted the globe with steel rails Among the men from whom these cases were drawn (and no account is taken of a number of contract-expired men, who left of their own accord when the disease first manifested itself) the food-supply was above criticism from any standpoint

TIME INCIDENCE

If beriberi were due to polished rice, *per se,* one would expect its occurrence to be fairly uniform throughout the year, and from year to year, in a population that eats the same kind of rice in apparently the same quantities all the time Such is not the case Of 565 patients admitted to the Candelaria Hospital in 1910, 114 were admitted during the first six months, and 451 during the last six months of the year In 1910, 565 were admitted, in 1911, with a force of employees 25 per cent greater and the Brazilian contingent relatively much greater, 232 cases were admitted Practically, we, as well as the laity, recognize the period from July to December as being the beriberi season This was the case in 1908, 1909, 1910, and from present indications, it will be the case in 1912 The year 1911 was an exception, the admissions for beriberi being fairly evenly distributed over the twelve months

PLACE INCIDENCE

The constant shifting of laborers from camp to camp makes it well-nigh impossible to present figures of value as to relative admission rates for beriberi from the various camps That certain camps yield a much higher percentage of beriberi patients than others is, however, firmly impressed on the minds of all who have, in any capacity, managed the labor on this work In the fall of 1910 more than three-fourths of all the West Indian Negroes in one of our camps (Camp 16) contracted the disease The same camp furnished us beriberi patients of all nationalities, and of all grades of employment so long as it was active In the same year, of four West Indian Negroes living in a palm shack set back from the right of way in the woods, near Camp 22, two died of beriberi, a third was invalided to Manaos and the fourth with the "rudimentary" type of the disease was lost sight of No other cases of beriberi occurred in any of the other 200 or so laborers strung along the right of way for a distance of several kilometers The only thing in any way peculiar about this hut was that it was set back in the woods instead of being out in the open, as were the others In Porto Velho, in 1910, in a period of four months, of three men in succession employed as job printers in a certain house, two died of the disease and a third was invalided to Manaos In a period of five months in 1909-1910, three men employed as night watchmen in this hospital died of beriberi, and a fourth was invalided home with the same diagnosis A considerable number of our orderlies were attacked, one of our cooks, two of our nurses and, as stated, two of our hospital physicians

The rate has been very high among the crews of the company tugs that ply between Porto Velho and the mouth of the Madeira River In 1910, on two occasions, one of these tugs was put out of commission because of the death or disability from beriberi of her officers, especially her pilots and engineers The officers living "first-class" have had the disease at least as often, relatively, as the men The captain of one of the company's larger passenger carrying steamers was invalided home last year with beriberi The universal complaint of the first-class passengers on this steamer is that they get meat served in too many ways, with too much grease Fresh beef, dried beef, fish, potatoes, onions, bread made from American flour beans and rice, with tinned milk butter and fruits form the bill-of-fare on all these boats

I have seen cases of beriberi in robust people who have never had malaria or hookworms I have seen it in nearly all races and nationalities It has occurred here among all grades of employees It is, I think, more frequent among those whose resistance has been lowered by other diseases or by the abuse of alcohol Children usually escape and women are not attacked as often as men As most of our employees are young men, I cannot speak positively of the age incidence

CONCLUSIONS

1 A fatal form of peripheral neuritis occurs among residents of the Madeira Valley and among the employees of the Madeira-Mamoré Railway This neuritis must be classified as beriberi, or as a member of an as yet hypothetical beriberi group

2 This disease bears no intimate relation to the consumption of rice, polished or unpolished, as a staple article of diet

3 This disease is not due to the absence of protein in the diet of those whom it attacks

I desire to make acknowledgment to Dr E J Whitaker, whose assistance in the preparation of this paper has been most valuable

Candelaria Hospital

Sleeping Out.—There people who sleep in the fresh air who have losis and those who E C *Jour Outdoor Life*

A FURTHER STUDY OF THE END-RESULTS OF THE CONSERVED OVARY *

JOHN OSBORN POLAK, M Sc, M.D
BROOKLYN

In 1909, I presented before this Section a report based on a study of the records of 300 cases occurring in my personal services, in which resection or conservation of an ovary had been done Since that time a large number of secondary operations have been necessary for the relief of symptoms caused by the retained or the resected ovary These explorations have given me a wider insight into the living pathology of the ovary or the part of the ovary which was retained in the effort at conservation

While I am still convinced that the importance of the ovary to the woman cannot be overestimated (not only is it the primary and all important organ in the reproductive cycle, but it regulates and controls the perfect attainment of development, growth and function in the individual woman, and its retention is essential to sex perpetuation), yet I must conclude from the study of the end-results of resection and conservation that frequently, owing to a defective appreciation of the living pathology of the ovary at the time of the primary operation and to our inability to estimate the effect which change of position and suture have on the retained ovarian structure, our attempts at conservation are often defeated

In this study I shall endeavor to differentiate between and draw conclusions from the end-results of the resected versus the conserved ovary It is surprising that so little clinical data of value have been contributed to the literature on resection and conservation during the past few years, for with the exception of the excellent analysis of the end-results collated by Clark and Norris, and the contributions of Peterson, Reynolds, Dickinson and myself, there is a dearth of new information On the other hand, much has been done in establishing the position and importance of the ovarian secretion Frank and Chipman have contributed excellent papers on this subject from which I shall take the privilege of quoting The parenchyma cells of the ovary secrete a substance or substances which react on the general body metabolism and control especially the nutrition, growth and activity of the uterus "This secretion is present at all times in greater or less quantity, but it is produced in greater abundance at recurrent periods, when it brings about those conditions of growth and hyperemia which characterize the proestrous or menstrual process After ovulation, which occurs during the estrous, the secretory cells of the ovary show still greater activity and cells of the ruptured graafian follicle become converted, largely by a process of simple hypertrophy, into luteal cells of the corpus luteum"

Chipman believes that the added secretion of these luteal cells an increment of quality of quantity, or of both raises the nutrition of the uterus which leads to those decidual changes in the uterine mucosa which insure the engrafting of a fertilized ovum When such engrafting occurs this secretion maintains the nutrition and growth of the placenta until the latter reaches its maturity The decadent and fibrotic changes which the placenta undergoes during the latter months of pregnancy are coincident with the retrogression and disappearance of the luteal cells

The ovary, while maintaining a perpetual secretion, undergoes a series of cyclical changes which increase or modify this ordinary secretion, and with these, the changes in the uterus are correlated While the exact nature of this secretion is not known, it is definite that the loss of the ovary means the loss of sex influence to the individual, and produces grave disturbance in the general metabolism The earlier in life the loss of the ovarian secretion occurs, the greater is the calamity, though clinical observation shows that the severity of the nervous phenomena differs in different individuals, as, for instance, the nervous symptoms are less subsequent to operation and the general health of the woman better when a hysterectomy and double oophorectomy have been performed for suppurative conditions in the pelvis than when a total ablation has been made for fibromyomas Again, it must be admitted that an ovary conserved for the ovarian secretion, if unhealthy, will leave the patient in a worse state mentally, nervously and physically than if total extirpation had been made

In regard to the types of ovary which can be conserved, my experience is in accord with that of Reynolds, that a moderately enlarged ovary, the seat of multiple follicular disease, may be reduced to the normal size, placed in a proper position in the pelvis, and retained with considerable hope that the dysmenorrhea and catamenial depression will be greatly improved, also that an ovary that has been in bad company may be dug out of a capsule of adhesion, the original focus of infection having been removed, and may go through such reparative changes as to become a useful organ An enlarged ovary is not necessarily a diseased one, for the size of the ovary is affected by its position A continuance in a bad position leads to changes in its tunic which favor the production of follicular change and retention-cyst formation

The natural and proper conservation of the ovary consists in leaving it alone, and in placing it in such a position in the pelvis without twisting the ovarian ligament that there is no obstruction to its afferent or efferent circulation An ovary should never be conserved and then allowed to drop back into the pelvis in a dependent position When there is interference with the efferent circulation, changes in the ovarian structure rapidly follow the organ swells from passive congestion, the stroma increases, the tunica thickens developing follicles become imprisoned, the amount of intrafollicular fluid is rapidly increased and retention-cysts form, often growing with great speed I have already reported a case of cyst formation within six days of the primary operation, due to a twist in the utero-ovarian ligament which interfered with the efferent circulation

The distinction between conservation and resection is not properly understood by the profession Excision of a portion of diseased ovary is conservative but not conservation, and the prognosis as to the final outcome of the conserved versus the resected ovary differs widely Conservation implies that the ovary is relatively normal, while resection deals with an organ more or less diseased

The ovary which can be resected with a fair degree of success is the ovary with a large monocyst on its surface, the small dermoid, or the fibroid, from which we are able by careful dissection to retain a sufficient quantity of healthy ovarian structure to make a functionating ovary It has been proved that the ovarian ligament which hypertrophies as a consequence of cystic changes frequently contains active parenchyma tissue, and that the ovary possesses a considerable capacity for regenera-

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association at its Sixty Third Annual Session held at Atlantic City June 1912

tion of tissue after its partial removal, if its circulation is not interfered with.

The influence of position on the conserved or resected ovary is a subject which has not had sufficient consideration from operators. My own experience has taught me that when anything interferes with the efferent circulation of the retained portion of ovarian tissue or the conserved ovary whether it be the position in which the ovary lies, as when it is dependent on the misplacement of the ovarian suture, or because of a misplacement of the uterus, which carries the ovary down with it, or when a salpingectomy has been made without due regard to the utero-ovarian anastomosis, the ovary becomes heavier and tends to fall into the culdesac and to change in its size rapidly.

As the surgeon becomes better acquainted with ovarian pathology and the necessity of the ovary being in proper position, fewer and fewer ovaries are removed. Our early mistake was not to recognize that multiple cystic ovaries were the result of interference with the efferent circulation and thickening of the tunic, both of which were due to the dependency of the organ occasioned by hyperplasia, etc. There is probably no part of surgery in which long experience and study of the living pathology is so important as in the decision of what shall be done with a particular ovary which is enlarged to two or three times its normal size.

To ascertain the end-results of the conserved versus the resected ovary, I have selected and tabulated from the records of my clinic since May 1, 1909, 229 cases in which some conservative procedure on the ovary has been practiced. There has been no primary mortality.

In sixty of the women operated on it was possible to retain both ovaries after freeing them from the associated adhesion produced by their infected or diseased neighbors, the uterus and tubes. In each of 102 cases, one ovary was conserved while extensive resection was done in but sixty-seven cases. No attempt was made to save pus ovaries. Enlarged, adherent, edematous, prolapsed and multiple cystic ovaries of moderate size were retained and tacked up in proper position in the pelvis without any attempt being made to diminish their bulk, except by the puncture of small cyst formations on their surface. The results have on the whole been gratifying, for out of twenty-four secondary operations in this series only three necessitated the extirpation of the conserved ovary, as against twenty-one ablations of the previously resected ovary.

I have been able to follow and keep accurate records of 181 patients out of the 229 operated on, and over 150 have been examined at monthly intervals, for periods varying from three years to two months, thus allowing us to make accurate notes and drawings of the exact pelvic conditions.

In this series there were twenty-eight resections of the ovarian structure from large monolocular cysts whose cavities contained from 1 to 10 pints of fluid, in which it was practicable to save sufficient ovarian tissue to construct a serviceable ovary about 2 by 5 cm. in size. Observation has shown that such an ovary during the first four weeks following operation undergoes a primary enlargement, sometimes attaining a size two or three times that of the portion conserved. It then slowly begins to shrink, to lose its tenderness and to perform its functions naturally. At the end of three months, on physical examination, the involution seems complete. None of these women have returned for reoperation. Two are now pregnant, and all have menstruated regularly since the operation. In three instances the type of the period is changed in time and duration and the quantity of blood lost each month has gradually diminished. None has shown any of the nervous phenomena of the menopause. Twenty-one have been examined in the past three months and their records show that seventeen have pelves free from exudate. The ovary is of normal size, in high position, palpable and not tender. Painless enlargement was present in the remaining four. All are at present enjoying good health.

An analysis of the twenty-four cases of this series coming to secondary operation, in which we were able to study the living pathology of the conserved or resected ovary in the pelvis and after its removal, has given us some helpful hints as to what to do next time.

The abdominal findings have been more or less consistent. The conserved or resected ovary has presented further cystic changes which have involved the entire structure and have always been attended by a low type of peritoneal inflammation, producing thin, diffuse adhesions most difficult to handle. This condition was noted in eighteen cases in which the left ovary had been retained, while only six women who had had the right conserved or resected have come to a secondary exploration. Thin-walled cysts of the size of an orange had formed on the resected ovary in four patients. In these the adhesions were particularly dense and extensive. It was evident that the sigmoid and omentum had promptly become attached to the suture line. A gradually developing amenorrhea or a persistent metrorrhagia was present in all of these cases.

These observations have suggested the following conclusions:

1. Only healthy ovaries should be conserved.
2. The right ovary when retained is less prone to subsequent inflammatory changes than the left.
3. All retained ovaries or portions of ovaries should be placed in such a position in the pelvis that their circulation is uninterfered with.
4. Resection gives the best results when its application is limited to large monocysts, retention-cysts, fibroids or dermoids.
5. The multiple cystic ovary should either be left alone or ablated. Resection is not permissible.
6. When a resection is made it should be extensive, excising the entire diseased area. The suture should only approximate the wound edges, not constrict them. The retained portion should be tacked up in the pelvis to maintain an equal circulation, and the suture line should be always covered with a reflexion of the peritoneum.

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ABSTRACT OF DISCUSSION

Dr. Le Roy Broun, New York: In deciding during an operation what course should be pursued, I am largely influenced by the age of the patient, the primary thought being, however, to have the pelvis in such a condition that secondary operations will not be invited by subsequent pathologic changes. I have had no experience in resecting ovaries other than in a few instances when, on account of the youth of the patient, it was imperative that as much as possible of the secretive surface of the gland should be preserved. These were instances in which a corpus luteum cyst had become pathologic in size. On the whole, it has never been my custom to meddle with ovaries with small multiple cystic follicles. For such conditions are evidence of disturbed circulation in the ovarian tissue and should be treated not by resection and leaving the ovary in the same position as before, but by lifting and retaining the ovary in a plane more nearly approaching the normal.

In the presence of adhesions, better results are obtained by using a sharp dissector rather than the fingers.

Where it is necessary to remove a tube, I hesitate greatly to leave the ovary, and rarely do so when the other ovary is unquestionable, except at the request of the patient, or in instances of young women. When the woman is at or near the menopause, or when the other ovary and tube are healthy, I believe it is to the interests of the patient to remove the ovary, together with the affected tube My reason for this belief is that no matter what method we may use for anchoring the conserved ovary after its accompanying tube has been removed, the disturbance in the venous return will, at times, be sufficient to set up pathologic changes in the conserved ovary sufficient to necessitate a second operation, which will at all times be more serious than the original operative procedure on account of the adhesions developing in the wake of the circulatory disturbance

In such conditions the after health of the patient is far better when the ovaries are removed at the same time than when we conserve them in whole or in part In instances of such conservation there has been, as a rule, a long period of tender ovaries, treatment and mental unrest In instances of hysterectomy for fibroids, the nervous disturbance of the menopause is lessened when the ovaries and tubes can be conserved, and I believe in general it is of advantage to the patient to do this In these instances, however, I have been forced to operate a second time on four patients for developed cysts in one of the retained ovaries My practice is at present to conserve the ovaries and tubes in such instances if possible when the patient is young, but to remove them when the patient is at or near the menopause

Dr W B Dorsett, St Louis I have had some very startling experiences following resections of the ovary in cases of dysmenorrhea, the conditions being entirely relieved by resection I do not mean to say that all conditions of dysmenorrhea can be relieved by resection of the ovary There is much in the technic that should be closely observed The resection should imply that a portion of the ovary is removed, not simply the opening of a cyst with the needle and dissecting it out In some cases it is almost impossible to scrape out the cyst and therefore a large portion of the ovary should be removed In doing so a wedge shaped piece should be cut down to the very edge of the ovary so that all cysts can be removed by the two incisions Regarding the covering over by the peritoneum mentioned by Dr Polak, there are two classes of ovaries that give me trouble those with very thick and those with very thin coverings In both there is tearing out when the needle is put in It is necessary to carry the needle down to the very bottom of the deepest portion in which the ovary has been incised that is when the wedge shaped piece is removed I agree with Dr Polak on the advantage of anchoring the ovary after operation One half of the results obtained are due to the suspension of the ovary rather than to the resection

Dr H. J Boldt New York In my experience the ordinary cystic degenerations of the ovary are absolutely different They gave no symptoms and were left alone Taking out a wedge shaped piece seemed useless In a large ovary it may be done, not for the purpose of removing part of the ovarian structure but for the purpose of decreasing the size of the ovary or of diminishing its weight It is possible that we may at times be compelled to do a secondary operation because of a cyst forming in that ovary Yet it is not desirable invariably to remove ovaries that seem to be healthy I should always retain the ovary, no matter what the condition causing the abdominal section so long as it was macroscopically in good condition Particularly is this the case in ovarian tumors With apparently no more functionating stroma, I have been able by shelling out the tumor to retain the ovary In one case in which it was necessary to remove the complete ovarian tissue on one side the other ovary had joined in the tumor It would have been most disastrous for the future of that patient to have taken out the ovary I was able to preserve sufficient of the ovarian stroma to continue to functionate, the patient is now married, and I have no doubt but that a satisfactory result will ensue Therefore, whenever an ovary is sufficiently healthy to retain its function I retain it

Dr. F J Taussig, St Louis My experience is based on three secondary operations but they have all been done on ovaries a portion of which had been left on the left side, and I have found that the cyst wall was always closely adherent between the ovary and the sigmoid or rectum The question arises, What is the cause of this increased frequency on the left side? When the two ovaries are equally good and there is no material reason for choosing one in preference to the other, of course, we would as a result of this evidence prefer leaving the right ovary and removing the left entirely But when the right ovary has to be removed and we are compelled therefore, in order to have any ovarian tissue left, to utilize the left ovary, we ought to see how we can vary our technic to diminish the number of cystic conditions following It occurs to me that the closeness of the intestine may be the main feature in this matter, and that if we draw the intestine over toward the right side by a suture, it might reduce the frequency of cyst formation

Dr T J Watkins, Chicago I agree with Dr Polak on the indications for the work His method of covering the line of sutures with the peritoneum would seem to me to be original with him, and I should like to ask if he has been doing that for a long time There is a possible danger of the development of follicular cysts from not leaving the ovary free. It has the advantage, however, of covering over the raw surface. I have been going a little further than Dr Polak. I have occasionally resected small abscesses in the ovaries in young women, preferring to run the risk of secondary trouble to producing an early menopause As yet I have had no unfavorable results so far as we know We have operated a second time in some ovaries of much the same class as mentioned by Dr Polak, cases of perioöphoritis in which the ovaries became cystic after operation In resecting these ovaries, the greatest danger has appeared to be from the formation of adhesions Lately if both ovaries have been affected, I have resected only one In resecting ovaries of late I have left less tissue, leaving only a comparatively small part of the ovary that is attached at the hilum, but in none of these cases has the menopause been produced What should be done in cases of so called sclerocystic ovaries is still a problem The pathologist has not yet determined whether they are really pathologic We have no idea what produces them and we have very little observation as to what becomes of them when they are left We should keep such patients who have not been operated on under observation for the purpose of determining what really becomes of these so called sclerocystic ovaries

Dr H. P Newman, San Diego, Cal I would have supposed that the removal of ovaries for menstrual pain—"ovarian dysmenorrhea," so called—and neurasthenic conditions in general, was no longer a debatable question in an organization like this Ovarian surgery has passed the experimental stage and no longer justifies the removal of the organs in young women for disturbed function, pain and nervous symptoms In view of the deplorable situation in which a woman in early menstrual life is placed on the sudden and complete cessation of this function, we are reluctant to do the necessary radical work even in cases of malignancy, uncontrollable hemorrhage and those pathologic conditions for which there is as yet no other relief And as for cystic and sclerotic conditions we no longer extirpate for them About the hilum sufficient ovarian structure for healthy functioning will be found, and by plastic work we may excise the degenerated tissue and retain enough normal to insure ovulation as well as menstruation, so essential to the well being of the young woman We may look perhaps, in the direction indicated by the reports of the newest developments in organotherapy and ovarian transplantation for suggestions of relief for those unfortunates who are now paying the price of radical operations, necessary or not formerly done, in whom there is no possibility of return to normal and who appeal to us for assistance in the effort of the nervous system toward compensation

Dr W B Dorsett, St Louis I hope Dr Newman did not understand my position to be that of removing ovaries for dysmenorrhea I said I had had remarkable results in the treatment of dysmenorrhea by resecting the ovary I did not report, and do not know that anybody has reported, removal of the ovary for the treatment of dysmenorrhea.

Dr. J O Polak, Brooklyn Dr Taussig in speaking of my method of resection implied that his conception was that there was no peritoneum to the ovary I do not cover my wound in the ovary with the peritoneum of the ovary I try to use the back of the broad ligament so that I turn the scar into the broad ligament It came to my notice a year and a half ago in reoperating on a woman in whom I had done a resection She came back to me because of adhesion of the sigmoid to the suture line of the right ovary which was down in the culdesac I separated that adhesion and made a further resection as it was the only ovary the patient had and she was young I partially turned the ovary on itself burying the suture line in the broad ligament, with satisfactory result I have continued that procedure The one point which I do wish to bring out is that true conservation is leaving the ovary alone, and that the best result I have had in resection has been in the resection of large ovarian cysts in which apparently there is no ovarian structure, and yet in which by careful resection it has been possible to retain a functionating and menstruating woman Two of the patients so treated are now pregnant This is a small percentage of the whole number of cases but is sufficient to show that the ovary even after marked resection is capable of producing an ovum

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HEREDITY IN NERVOUS DISEASE AND ITS SOCIAL BEARINGS*

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My theme is old, yet every topic into which heredity enters can now, in view of the recent advances in this study, be viewed in a new light So possibly I may be able to present ideas in a new way

Mental abnormality may be divided into two sorts lack of development and weakness Let us consider the origin of each sort The development of an individual is a complex of processes which work individually to the production of specific organs, and collectively to the development of the individual as a whole Modern studies in heredity indicate that, typically, each part develops to a certain extent independently of every other, at least in the early stages Later the secretions of thyroid and thymus, testis and ovary, and doubtless other organs, exert a general or a specific influence on development Finally, insufficient nutrition of the embryo or the presence of certain poisons may exert a wide-spread inhibiting effect on developmental processes Even starvation exerts a somewhat selective influence since all organs are not equally retarded, and there is reason for concluding that malnutrition and poisons have a different effect on different persons, retarding those in whom the internal impulses to development are weakest Consequently, it is difficult to draw inferences as to the influence of alcohol on the development of man from its influence on the development of guinea-pigs It is stated that when guinea-pigs and rabbits are subjected to alcohol their young develop imperfectly There are many detailed family histories in which both parents have been alcoholic sots during the reproductive period, and yet they have produced children without spina bifida, harelip, cyclopia or other marked teratologic conditions

Failure of mental development may, on the classification adopted, be regarded as of four sorts

1 Intrinsic and general, producing idiots and cretins
2 Intrinsic and specific, producing the feeble-minded
3 Extrinsic and general, resulting (it is alleged) in abortions, miscarriages, etc
4 Extrinsic and specific, causing (perhaps) some cases of harelip, eunuchoidism and some other defects

Of the four classes, the second is the commonest From my point of view feeble-mindedness is the failure of development of specific mental traits, the determiners for which are not present in and have never been acquired by the germ-plasm The defects are a direct inheritance from our remote ape-like ancestors in which the trait had not yet been acquired The feeble-minded have gained most human traits, but not all the mental ones

The group of the mentally weak includes those persons who, under the influence of stress, break down mentally The stress reveals the hidden weakness but does not cause it Studies of the families of epileptics, dementia praecoxes and manic-depressives reveal the fact that they belong to strains with mental weakness If we inquire whence these strains arose, no final answer can be given, but the suggestion may be made Every person has a weakest part, we are not like the "one-hoss shay" And there is evidence that there are human strains that are not resistant to attacks on the respiratory tract, others whose weakness is in the circulatory system, others whose alimentary tract is the first to give way, and others whose nervous mechanism cannot stand great stress And those persons who go insane belong, for the most part, to this last set

The origin of these insane families may well go back to their animal ancestors, for animals are characterized by precisely these same strains Or we may say that the mentally weak include those mental adjustments which have not kept pace with the increasing demands of our civilization Neural weakness in man is probably a direct transmission from neural weakness in lower animals

From this point of view, the origin of a feeble-minded child, which seems so like the visitation of an offended God, is merely the necessary cropping out of inherited animal traits, and the origin of a functionally insane person is, within limits, determined by a fortuitous combination of weak determiners

Leaving for a moment the matter of the origin of neuropathic strains, let us consider their relation to society Society is an organization of a gregarious species for development of common interests through cooperation and division of labor Social progress implies mutual understanding, ability to cooperate and to play one's part well, while regarding the good of others Society is built on human behavior, and the behavior of an individual at any time is his reaction to the stimuli that fall on him The reaction is determined not only by the stimulus but also by the individual's make-up, both that part which comes through heredity, and that which comes through training (which, in turn, is largely influenced by heredity) Society has decided that certain kinds of behavior — reactions — are, on the whole, good for the development of society, and that certain others are bad The inability to learn to count, to read, to write, to distinguish colors, the lack of ambition, of foresight, of industry, of inhibition to drink, of sex control and control over other emotions, such as anger, fear, hatred, suspicion and revenge, the strong desire to take the property of others, to realize excitement by conflagrations or by false tales the tendency to seclusiveness, to shyness, to conceit, to periods of depression, to hyperexcitation and exaltation, to expansive ideas, to loss of memory, to loss of orientation, to cruel treatment of animals and children — all of these reactions are "inheritable" and are bad for society, which has labeled them "bad behavior" The persons who behave this way are incompatible with a safe and progressive social organization, and they should, in the worst cases, be segregated to protect society, and above *all that they may not reproduce their kind*

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

Society's method of dealing with those who exhibit antisocial behavior is often inadequate The theory of treatment is (1) to avenge the misdemeanor, (2) to give pain, so as to supply a deterrent to the individual, and (3) to set an example of consequences which shall act as a deterrent to others

The first motive is clearly illogical, as the persons who act antisocially cannot properly be held responsible in this behavior in the sense of deserving pain The occurrence of recidivists who form a large part of all "criminals" indicates the inadequacy of the second aim As for the third aim if the punishment of the individual is of little effect on him, it is clear that it must be of much less effect on another As a matter of fact, there is little evidence that punishment has any effect except in minor antisocial behavior Since punishment is inadequate in the case of the grosser breaches of conduct the whole system should be abandoned and replaced by lifelong restraint like that afforded the imbecile and permanently insane

Finally, since most if not all kinds of nervous disease have the hereditary element, it is clearly desirable that such disease should not be perpetuated by unfit matings such as between two strains containing nervous weakness In order that such marriages may not occur, the fact of neural weakness in a family strain should be known to one contemplating marriage into that strain It is the duty of a physician in the exercise of his broad function as eugenist, to warn young people who are contemplating a choice that is clearly unfit The rule of secrecy in family affairs enjoined on physicians should not apply to prevent a physician from speaking in such cases even as the laws in some states are requiring him to report venereal disease Any rule of secrecy which acts against the progress of society, and especially against fitness for marriage is a grossly antisocial, immoral law, and should be repealed Not infrequently the student of the heredity of a characteristic has to ask the physician concerning the occurrence of a characteristic in a given person A B, whom the student knows only as the name appears in some pedigree with which he is working occasionally the physician, usually a young man, declines to assist on the ground that he is not at liberty to give the desired information Knowledge that might well lead to conclusions of great import to humanity is withheld in the blind following of a rule whose main motive is praiseworthy but whose application is too broad *Inheritable traits are not personal property* They come to the individual from down the ages out of the society of the past, they will be disseminated if the person or his fraternity have children, into the society of the future What right has the momentary possessor of the trait to claim it as his private and personal affair? A knowledge of his traits belongs to society is it not wrong for the medical profession to maintain these false ideals of the private nature of inheritable traits?

If the defense is that physicians must protect those by whom they are paid even at the expense of society, then the sooner the state takes over the whole matter of private as well as public sanitation the better A relation that was satisfactory when disease was regarded as a personal and private matter is inadequate now that health and disease are properly regarded as public and social affairs I do not see any logical outcome of the development of medical science but this that the health of the individual shall be regarded as one of the principal interests of the state, and that eugenics, as determining *liability for disease or for imperfect* development, shall be recognized as one of the principal divisions of state sanitation

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ABSTRACT OF DISCUSSION

Dr L Pierce Clark, New York Many, if not most neurologists, make a special point of advising their patients regarding the matters laid down in Dr Davenport's paper The whole subject will take an immense jump forward in practical impetus when we can predict the future outcome of different kinds of matings The matter is now largely a case of spilled milk or locking the barn after the horse is stolen To control and manage all medicine is a questionable procedure for any class of society, certainly an extra hazardous venture as our society is constituted to day The crying need of the moment regarding sterilization is more definite information and not more legislation The latter is now far outrunning the former In Connecticut they have not made use of their anti marriage law of the unfit at all as the people are not back of it I understand that a reactionary tendency is in progress in Indiana also The main practical issue to day is to collect and study facts regarding sterilization of the unfit teach the people the importance of application of these facts and follow a well thought out plan of legislation After all the prophylaxis of preventing marriage of the unfit, rather than sterilization, will be the truly rational approach to the problem

Dr A C Brush, Brooklyn We must consider this question seriously before we push any measures to the point of *legislative enactment To start a public campaign on the* matter of the new series of transmission of hereditary tendencies too abruptly would be unwise According to one pronouncement of the mendelian law, if a man with psychopathic tendencies marries a healthy woman and four children are born, two will be psychopathic and two normal Without knowing whether or not a young person will develop psychopathic tendencies have we a right to interfere with the marriage, or how will we select those with psychopathic tendencies? I wish Dr Davenport would consider that in summing up I am not, however, advocating the theory of striking at the whole family, that would be an injustice.

Dr Woods Hutchinson, New York The public mind is becoming quite receptive to these ideas, even though at first sight as repulsive as that of sterilization The strongest expressions of objection to the new legislation and doubts cast on the wisdom of it come from the medical profession rather than the laity As Dr Davenport says, the more carefully these defectives are studied, the more the hereditary element comes out in them At the training school at Vineland, N J, they have clearly demonstrated that from the union of a feeble minded man and a feeble minded woman never yet was born a normal child, and in the various matings between sound and feeble minded persons the defects appear in offspring almost in mendelian proportions In investigating criminals born in Indiana I have shown that nearly 50 per cent of them are traceable to 150 families The problem is one of great importance, and its solution is feasible and practical It involves the sterilization of only about 3 per cent of the community, and within two generations we should have at least diminished by three quarters our criminals, prostitutes, insane, epileptics feeble minded and inebriates I spent a week in a reformatory where sterilization has been carried out to the fullest degree, out of 700 sterilizations on confirmed criminals, over 600 were at the request of the men involved They are willing to protect themselves and society against this possibility, if society will approach them in a kindly, broad, liberal and sympathetic spirit If we could make our influence felt in the courts and study the individual history of these criminals, we could accomplish something I asked a famous detective if he knew anything of the history of the McNamara brothers, the dynamiters The general statement had been made that these men were ordinary members of society who had gradually let the lust of blood and hatred of capital grow on them until they committed crime "Yes," he said, "their father was in jail twice, once for assault for attempted murder, and once for incest with his own feeble minded child, sister of the two criminals, and there was another feeble minded child in the family" And yet that matter was threshed out for months in the press and the courts without any question as to the mental responsibility of those two men I believe that what we as physicians have to say on this subject, based on a rational, broad, humane regard for the unfortunate, should have weight. Of course, we know that 60 to 75 per cent of the fallen women are definitely mentally defective We should look on those people as our unfortunate brothers and sisters who fail to develop, who need our care, sympathy and protection and not our hatred and punishment Then, if we rise to our possibilities, we shall reform society, wipe out crime and reform even our courts and the legal profession

Dr William W Graves, St Louis I would call attention to the fact that in clinical medicine some attention is invariably paid to that part of the study called family history, but up to the present, so far as I know, the data thus derived have been based largely on hearsay testimony Family pride and foregetfulness and, in some, untruthfulness render the data thus secured inaccurate As much as I would applaud the good accomplished by field workers in the collection of data bearing on family histories, yet the study of the individuals of families in a comparative clinical way will yield just as important and even more definite information bearing on those factors which make for a bad heredity In our studies of the problems of heredity it is not sufficient to depend on hearsay testimony, we must apply, in addition, comparative clinical methods to these problems We know of no standard of humanity except that which is established by the parents It is obviously unfair to compare the members of one family with those of another because the determiners of the ascendents represented in the parents are different in each family If we will utilize in our studies of heredity that standard which is established by each pair of parents and study the parents and the progeny in a comparative clinical way, we shall get back to first principles It is recognized everywhere that well mated and healthy parents, as a rule, produce healthy progeny, which compare favorably one with the other and each in turn with the parents, so that, utilizing the parents as standards and approaching the problems of heredity in a comparative clinical way, in addition to estimating hearsay testimony at its full worth, we shall not only be able to determine the effects of bad mating but also to determine those factors of disease which make for bad heredity

I was pleased to hear Dr Davenport say that recent studies have shown that alcohol has not played that important rôle in the production of bad heredity which we have heretofore believed it did My observations are wholly in accord with this view There is a disease, however, which has as yet failed to receive full consideration as a cause of bad heredity While we have recognized that syphilis may be transmitted to the offspring, we have recognized as "tainted" only those who show Hutchinson's teeth, interstitial keratitis, deafness without otitis, bone, joint, skin and mucous membrane affections, the other progeny of syphilitic parents who have not shown these signs we have considered as healthy individuals Comparative clinical studies of the progeny of syphilitics will show how false are our present conceptions in regard to the effects of this disease Such studies generally applied and using the parents as standards will not only enable us to determine the effects of good and bad mating, but will also enable us to determine the diseases which render a good heredity bad and a bad heredity worse

Dr E E Southard, Cambridge, Mass Whatever may be said against the field workers and their lack of intimate medical knowledge or anthropologic knowledge, which are not really always necessary, there seems as yet to be no instance of a normal child born from feeble minded parents The same cannot be said, I think, of insane parentage, but there are few data in this direction We are apt to synthesize the conditions of degeneracy, insanity, epilepsy, inebriety and the like, including crime and pauperism, under the same category, without due attention to the different parts which hereditary and non hereditary factors play Take Dr Brush's problem concerning the marriage of a normal person with a degenerate Suppose the degenerate to be a feeble minded person, there would be strong doubt in my mind whether the man desirous of marrying her is normal I think that problem is not so common as it is in mendelian fields, where we can control the sexual relations The marriage of two insane persons, I think, is relatively infrequent At least I endeavored to collect data in this direction in the state of Massachusetts, which is supposed to be a highly degenerate state I found a few instances of the union of two persons degenerate in the direction of insanity The problem of the union of epileptics is economically a smaller one, it is not likely that two epileptics would marry unless they were also imbecile I remember one meeting in which a man stated that he had a very good example of heredity A grandfather, a father and a son showed epilepsy "This," said he, "would form a good example for the hereditarian" But it turned out that the grandfather had senile arteriosclerosis with late epilepsy The father was syphilitic, and the son had polioencephalitis with ensuing epilepsy It seems hard for medical men to understand that most series of facts are a result of a conspiracy of factors, and in this conspiracy the hereditary and the non hereditary factors may both play an important part Which is the more important is the question Medical men call certain conditions hereditary. What are the factors in these cases? The factors are mandatory The children are under certain mathematical rules, subject to the disease of the parents But there are conditions in which the hereditary factor is not mandatory, it is what the lawyers call permissive, and if the other factor that sets off the disease does not come into the life of the offspring, then the disease stands out and the heredity is so far concealed. On this line of distinction between the mandatory and the permissive types of factors in inheritance, I think that one may tend to resolve the difficulties which arise, when hereditarians on the one hand and the medical etiologists on the other get together and cannot come to terms

Dr Tom A. Williams, Washington, D C I was surprised to hear Dr Davenport say that many of the traits which prevent a proper adaptation come from the lower animals Of course, all our traits do originally come from the lower animals But why select those particularly as coming from the lower animals? We should not refer to our remote origin in animals for such traits, but to the fact that there has been the acquisition of an unsuitable character in the germ plasm—not an acquired character, but a modification of the germ plasm through some noxious influence It is not conceivable that a feeble minded race can have survived through the eons of time through which the human species has persisted

Those who should not marry and should not transmit are those who are the possessors of undesirable traits If when an apparently desirable person happens to transmit to his or her offspring undesirable traits, such undesirable offspring should be prevented in their turn from begetting or bearing children, even though he may produce some healthy progeny

There are certain tendencies which develop in children as well as in adults which are not the propensities of the race at all, but which occur by reason of the extreme differentiation of the reactions in different parts of the brain due to environment and other causes, which make it easy to pervert the natural tendencies, the capacity for which is inherent considering the great complexity of the cortical substance in man it is very easy to pervert tendencies entirely by environment or education One of the instances used by Dr Davenport was pyromania, another, excessive libido Each of these particular characteristics in an adult may be induced in childhood by a series of circumst ade those particular practices to him there
individuals in whom the d ous,

Lackey, Canton, who was a member of the legislature which passed the act granting $30,000 to the State Board of Health and to whom credit is given by the secretary of the State Board for its passage Dr Homer Blane, Cadiz, the president of the society, acted as toastmaster and many communications from friends of Dr Lackey were read. Dr J W Crenshaw responded to the toast, "Dr Lackey, as the Public Do Not Know Him," in which he paid eloquent tribute to the noble work of the beloved country doctor and expressed the regret of his colleagues at Dr Lackey's change of residence to Nashville Dr Lackey made a suitable response

LOUISIANA

Leper in Winnfield—A Mexican, who has been in Winnfield for a month or two, has been discovered to be a leper, and has been sent to New Orleans to be treated there or placed in the lepers' home

The Hebert Case—The sheriff of Lafayette Parish has arranged to place a guard over the home of Hebert the insane leper at Lafayette, who recently escaped from the State Leper's Home

Isolation Ward Needed.—Dr Joseph A Dana, house surgeon of the Charity Hospital, New Orleans, strongly recommends the erection of an isolation hospital for the treatment of contagious and infectious diseases

Sanatorium Opened.—Crowley Sanitarium, which has been in course of construction for several months, is practically completed and will soon be opened The officers of the institution are Dr E M. Ellis, president, Dr D D Mims, vice president, and Dr R B Raney, secretary treasurer

Tuberculosis Cottage Dedicated—New Orleans Typographical Union No 17 dedicated a cottage at Camp Hygeia, the colony of the New Orleans Antituberculosis League in St Tammany Parish, October 27 The cottage has two rooms, has been completely furnished and screened and is ready for occupancy

The State Board's Thanksgiving—Dr Oscar Dowling, president of the State Board of Health, promulgates the following as the Thanksgiving proclamation of the board

> For the constantly increasing public interest in subjects akin to sanitation and preventive medicine for the loyal support as a whole of the medical profession of the state for the almost unanimous cooperation of the public health officials national and local and last but not least for the good will of the united press the Louisiana State Board of Health offers its most sincere thanks

Personal.—Dr E M Hummel, New Orleans, suffered a fractured rib and lacerations of the scalp in a collision between his automobile and a trolley car, December 1——Dr W T O'Reilly New Orleans, has been made superintendent of public health——Dr Chaille Jameson, head of the laboratory demonstration work of the New Orleans Tropical School of Medicine, has returned from Port Limon, Costa Rica, where he installed a laboratory for the United Fruit Company——Dr Oscar Dowling has been reappointed president and a member of the State Board of Health to succeed himself——Dr G C McKinney, Doyle, has been appointed a member of the State Hookworm Commission——Dr J D Fulton has succeeded Dr J W K. Shaw as city health officer of New Iberia and coroner of Iberia Parish——Dr Charles V Unsworth, New Orleans, has been appointed physician in charge of the Louisiana Retreat, vice Dr St Mark Fortier, deceased

MARYLAND

Public Health Lectures—Dr William W Hobson, on behalf of the Medical and Chirurgical Faculty of Maryland, is making arrangements throughout the Eastern Shore for a series of public health lectures

Baltimore

New Officers—Baltimore City Medical Association, December 3 president, Dr Harry Friedenwald, secretary, Dr Emil Novak

Nurses' Home Opened.—The Hecht Memorial Nurses' Home at the Hebrew Hospital was opened December 1 The building is three stories and a basement in height and has accommodation for sixty nurses

Increased Appropriation for Health Department.—The Board of Estimates has made an appropriation for the health department for the coming year amounting to $218,415, an increase of $15,310 over the appropriation for 1912

Small-Pox.—During the recent outbreak of small pox there were five cases which were sent to quarantine Vaccination was done very generally in the affected section and thirteen who had been subjected to the disease were isolated The disease was said to have been brought to Baltimore by a negro from Cumberland, and all of the patients are negroes

Personal—Dr L McLane Tiffany was operated on at the Union Protestant Hospital, December 2——Dr Thomas R Brown, who has just returned from Europe, has been placed in charge of the clinic on digestive diseases at the Johns Hopkins Hospital——Dr Lloyd P Shippen inherits $1,000 under the will of the late Dr Richard A Cleeman, Philadelphia

MASSACHUSETTS

Reorganization of Staff—The department of general surgery in the Boston Dispensary has been reorganized and placed under the charge of Drs Benjamin Tenney and John Homans, each to be on duty for six months Dr Frederick M Briggs has been appointed consulting surgeon and Drs Robert H Vose, Theodore C Beebe, Henry M Chase and Henry D Lloyd have been made assistant surgeons in charge of the genito urinary department

Personal.—Dr Charles F Whitney, Boston, has been appointed assistant professor of physiological chemistry in the University of Vermont, Burlington, vice Dr C F Dalton, who has been appointed secretary of the State Board of Health——Drs William E Synan and J N Landry have been elected members of the school committee of Fall River——Dr John F Croston has been elected a member of the school committee of Haverhill——Dr O W Roberts has been elected first vice president and Dr A C Eastman a director of the Springfield Baby Feeding Association.——Dr W J Collins has been elected chairman and Dr J E Hayes a member of the executive committee of the Northampton Antituberculosis Society

MICHIGAN

Personal—Dr Gordon H. Yeo, resident physician at the Calumet & Hecla Hospital, Calumet, has gone to the Isthmian Canal Zone——Dr Emory J Brady, a member of the staff of the Kalamazoo State Hospital, has been appointed assistant superintendent of the Newberry State Hospital in the Upper Peninsula

Items About Hospitals.—The Woodward Hospital has been established at 821 Woodward Avenue, Detroit, with accommodation for forty patients The institution is intended as an emergency hospital, and its clientele will be largely from the employees of large manufacturing establishments——West side Hospital, Bay City, was formally opened November 3——Work commenced November 1 on the addition to Nichols Hospital, Battle Creek, which is to be four stories in height, of steel, brick and cement construction and to cost $35,000——Sparrow Hospital, Lansing, was opened to the public, October 27——The supervisors of Shiawassee County have taken steps to provide a county hospital for the care of contagious diseases——The western annex of the Detroit Tuberculosis Sanatorium is completed and ready to receive patients The annex increases the capacity of the institution from twenty to thirty patients

MINNESOTA

Sanatorium Burned—The main building of the Pokegama Tuberculosis Sanatorium, Pine City, was burned November 2, with a loss of about $5,000

State Inebriate Farm Soon to Open.—About the middle of this month the State Farm for Inebriates, Wilmar, will be opened——Dr G H Freeman, assistant superintendent of the St Peter State Hospital, has already assumed his duties at the State Farm

State Board Report.—The annual report of the State Board of Health shows a marked decrease in the deaths of children under five years of age In 1910, 1,709 deaths were reported and in 1911 1,092 Typhoid shows a decrease from 688 to 294, diphtheria from 506 to 335, scarlet fever from 284 to 190 and poliomyelitis from 201 to 54 The two chief causes of death were tuberculosis and pneumonia

Reasons for Vaccination—Dr P M. Hall, health commissioner of Minneapolis, thus crystallizes his reasons for vaccination in Minneapolis

> Past experiences of the Minneapolis health department with small pox.
>
> Present conditions in Eastern cities where an unusually large percentage of cases is of the malignant type
>
> Danger of a patient suffering with small pox in the severe form being shipped into Minneapolis because of the general reputation of the city for having facilities and properly caring for the disease.

MONTANA

State Should Purchase Insane Asylum.—The Silver Bow ledical Society at its meeting, October 23, in Anaconda, nanimously voted in favor of the state purchase of the nsane asylum and grounds at Warm Springs

Outbreak of Typhoid Fever—An outbreak of typhoid fever reported at Malta in the Milk River Valley, where fourteen ases exist Dr Thomas D Tuttle Helena, secretary of the tate Board of Health, who has investigated the situation, tates that the outbreak is due to the contaminated water of ells in the town

Personal.—Dr F D Pease has been appointed city physician f Missoula——Dr A L Martinallo, Butte, has started for taly——Dr and Mrs John B Shaw, Terry, who were eriously injured in a runaway accident, recently, are reported o be convalescent——Dr J P Aylen, chief surgeon of the orthern Pacific Hospital, Missoula, has resigned and moved o Fargo, N Dak——Dr and Mrs Frederick M Poindexter, illon, sailed for Europe, November 28

NEBRASKA

Society Changes Its Name—The local medical society, rganized a year ago in Omaha, has adopted the name, the maha Academy of Medicine and Surgery

New Officers.—Republican Valley Medical Association at xford, November 1 president, Dr Henry Farrell, Axton ecretary Dr P A. Sundbury, Holdrege (reelected)——undy Hitchcock Chase Hays County Medical Association at Vauneta president, Dr W E Stewart, Stratton (reelected) ——Boone County Medical Association at St Edward, November 21 president, Dr Ernest Thelen, Cedar Rapids, secretary reasurer, Dr G W Sullivan, St Edward

Hospital Notes—Dr John Buis Pender, has built and is perating a private hospital for surgical and noncontagious medical cases with accommodation for ten patients——The directrs of the McCook Cooperative Hospital Association have completed the first payment on the building recently purchased y them for hospital purposes——The new Contagious Disase Hospital, Omaha, made possible by the gift of a house at enth and Douglas Streets by the late Anna Wilson, opened o receive patients November 7 The building has thirty three ooms and has two distinct sections, one for scarlet fever and ne for diphtheria

NEW YORK

Convalescent Home for Buffalo—Mrs Frank H. Goodyear as purchased eighty acres of land in Williamsville, on which he will build the Josephine Goodyear Memorial Home for onvalescent Children The home will be constructed on the ottage plan, will be undenominational and accessible for convalescent children from any Buffalo hospital or home

Dispensary Leases College Building—Instead of opening a eparate dispensary, it is reported, Syracuse University College f Medicine has leased its new dispensary building to the yracuse Free Dispensary, in consideration of having its aculty members serve on the staff of that institution The ew dispensary building, which was planned with much care s now rapidly approaching completion

Opposes Death Penalty—The State Superintendent of Prisns, since the release of Albert T Patrick, is reaffirming his ontention of last winter that capital punishment should be bolished He believes that the ends of justice would be served y a sentence of from twenty five years to life and states that here is not a man in the prisons of this state who has served term of twenty five years He also recommends a board of ardons to have the power of recommendation, leaving the overnor the power of granting pardons

New Officers—Queens Nassau Medical Society, November 6 president, Dr W G Frey, Long Island City, secretary reasurer, Dr James S Cooley, Mineola——Clinton County ledical Society, at Plattsburg November 19 president, Dr M Briggs Champlain, secretary, Dr T A Rogers, Plattsburg ——Medical Society of the County of Westchester, at White lains, November 20 president, Dr E W Weber, White lains, secretary, Dr W S Woodruff, Mount Vernon

Personal.—Dr O H Babbitt Auburn has been reelected ail physician and Dr William E Walsh, Auburn, coroner's hysician for Auburn Dr J H Whitbeck, Cayuga, has been lected coroner's physician for the southern part of Cayuga ounty, and Dr A D Stewart, Port Byron to a similar position or the northern section of the county——Dr ack Killen, Binghamton, to avoid running down a foot passenger, steered his automobile into a telegraph pole and was thrown to the ground sustaining serious injuries——Dr William A Binr, state bacteriologist has established a temporary laboratory in St Johnsville, where he will take cultures from the pupils of the schools and factory employees in an endeavor to ascertain the cause and the carriers of diphtheria, which has been so prevalent in the village

New York City

Hospital Moves—The Hospital for the Ruptured and Crippled has moved to its new $1,000 000 building on Forty Second Street east of Second Avenue

Personal—Dr William Seaman Bainbridge has been appointed consulting surgeon to the Tarrytown Hospital Tarrytown N Y——Dr Joseph J O Connell, health officer of the port of New York has sailed for Panama——Dr J Bion Bogart, Brooklyn, who has been seriously ill with septicemia due to an operation wound is reported to be out of danger

New Officers—Medical Society of the County of New York 107th annual meeting, November 25 president, Dr Brooks H Wells, secretary, Dr John Van Doren Young——German Medical Society December 2 president, Dr Gustav Seeligmann, secretary, Dr Martin Rehling——New York Academy of Medicine December 5 president, Dr William L. Polk, recording secretary, Dr Charles F Adams, corresponding secretary, Dr Egbert Le Fevre——Third Ward of Queens Borough Medical Association Dr Charles E Strong Long Island City, temporary chairman Dr E P Lawrence, Flushing, temporary secretary

New Hospital Bulletin—The Woman's Hospital, situated at Cathedral Parkway and One Hundred and Tenth Street, has commenced issuing a bulletin for free distribution among those who are interested in gynecology The scientific articles are contributed by the surgical staff connected with the hospital and based on work done in the hospital and laboratory This laboratory is finely equipped and a salaried pathologist is employed who gives his entire time to the work, opportunity is afforded for the investigation of the most intricate problems Dr J Riddle Goffe is the managing editor of the new publication which will appear occasionally

Mayor Blamed for Increase in Street Accidents—The National Highways Protective Society blames Mayor Gaynor for an increase in the number of street accidents, attributing this increase to the mayor's order forbidding police to arrest drivers or motormen in automobile or street car accidents unless there is evidence that would support a charge of manslaughter or negligence There were during the month of November, 1912 223 accidents, 56 of which were fatal, against 174 accidents with 15 fatalities for the month of November, 1911 Throughout the entire state automobiles severely injured 106, trolley cars ran down 29, and wagons 18

Protests Against Budget Cuts—In making up the budget for 1913 the Board of Aldermen have cut the appropriations of the Board of Education $229 790, the Board of Health, $100,000 and the Department of Charities, Bellevue and the Allied Hospitals, $16,514 Nine medical inspectors and eight supervising nurses have been dropped, leaving 81 000 parochial school children without medical inspection and of these 32 000 will not have even the attention of a supervising nurse Dr Ira S Wile, who was recently appointed to the Board of Education, is making a vigorous protest against this policy, the New York Milk Committee, through its Committee on the Reduction of Infant Mortality, of which Mrs J Borden Harriman is chairman, is up in arms because the work of the milk stations will be crippled by the cutting off of the allowance to the Division of Child Hygiene which would have made possible an expansion of their work The State Board of Charities is also urging on the mayor the necessity of vetoing the action of the aldermen A joint letter has also been sent to the mayor by Comptroller Prendergast, President Mitchell of the Board of Aldermen and Borough President McAneny begging him to veto these cuts and others affecting the social welfare of the people

New Cocain Law Urged—As a result of the recent investigation into the sales of cocain in this city many revelations have been made It has been shown that cocain can be very easily obtained throughout the city, that Manhattan is a distributing station for New Jersey and that the drug may be obtained in Sing Sing prison and in the Tombs As a result of these findings, Judge Swann of the General Sessions who has been dealing with the cases convicted under the present law finds this law very inadequate Although the law as passed in 1907 and amended in 1910 makes the sale of cocain except as provided for, a felony, punishment is limited to a sentence of one year and a fine of $1 000 Other felonies are punishable by imprisonment for at least five years Judge Swann would amend the law so that the mere possession of the drug would be considered a misdemeanor, punishable by a fine of $1,000 or one year in the penitentiary, while the actual sale of cocain should be punishable by imprisonment for at least five years Efforts to have such a law passed at the coming legislature will be made——A renewed effort is being made to suppress the sale of opium and cocain in the new Tenderloin Thus far, convictions have been secured against seven places——It has been discovered that cocain is being sold to a considerable extent to the negroes of the west side

NORTH CAROLINA

New Officers.—High Point Academy of Medicine president, Dr G F Duncan, secretary treasurer, Dr S S Coe, Aurora

New Hospital—The Mercer Hospital Association of Durham has been chartered with an authorized capital of $100,000 The incorporators propose to erect a new general hospital in the city Dr C A. Adams is one of the prime movers in the enterprise

Vital Statistics Law—The State Board of Health, the Medical Society of the State of North Carolina and the medical profession in general, are actively developing public sentiment toward the securing of a vital statistics law for the state at the next session of the legislature, and it is believed that an educated public sentiment will secure the passage of the law

Portrait to be Presented to State Library—Drs J Howell Way, Waynesville, H T Bahnson, Winston Salem, and R H Lewis, Raleigh, the committee appointed by the Medical Society of the State of North Carolina to have prepared a life size oil portrait of the late Dr P L Murphy, Morganton, for presentation to the state library, have had the portrait painted and the presentation will take place in the state capitol at a time to be announced later

Opportunity for Study of Tuberculosis—The superintendent of the State Sanatorium for the Treatment of Tuberculosis, Montrose, is arranging a schedule of clinical and pathologic studies in tuberculosis for the benefit of physicians of the state the course to be given at the sanatorium, later in the winter Especial stress will be laid on the diagnosis of tuberculosis and efforts will also be made to send incipient cases early to the institution

Personal.—Dr Joseph Akerman, Wilmington, has succeeded Dr C D Bell Wilmington, as coroner of New Hanover County ——Dr Lyle S Booker, Durham, announces that after December 1, he will limit his practice to surgery——Dr Albert Anderson, Raleigh, has been appointed a trustee of the Rainey Library——Dr M R Gibson, *who has been taking post* graduate studies in Baltimore, has returned to his home in Maxton where he will confine his practice to the diseases of the eye, ear, nose and throat

PENNSYLVANIA

New Officers—Somerset County Medical Society, at Rockwood, October 15 president, Dr Bruce Lichty, secretary, Dr H C McKinley, both of Meyersdale——Blair County Medical Society at Altoona, November 26 president, Dr W L Lowrie Tyrone, secretary, Dr Charles F McBurney, Altoona

Hospital Notes.—Fire in the children's building of the Epileptic Colony Farm, Oakbourne November 20 caused damages amounting to $35,000 The twenty three inmates were roused and removed without panic or casualty——In honor of the man who was instrumental in securing a hospital for Scranton, the officers and directors of the Taylor Hospital propose to change the name of the institution to the Edward James Memorial Hospital.——The new addition to the Miners Hospital, Spangler will be ready to receive patients, November 1 The building will accommodate twenty eight patients which will increase the capacity to sixty two beds

Personal.—Dr P O Bleiler Allentown, is reported to be seriously ill——Dr Robert S Patten, Danville, while endeavoring to cross a railroad crossing in that city, was struck by a locomotive and seriously injured, December 1——Dr S F Earnest, Hummelstown, who has been under treatment in Harrisburg Hospital, has been brought home——Dr Raymond B Mixsell Easton has moved to Pasadena, and has been appointed clinical instructor of diseases of children in the Medical Department of the University of Southern California Los Angeles——Dr A H Eggers, Pittsburgh, has been appointed medical superintendent of the Augusta (Ga) hospitals and will reside at the City Hospital

Epidemic Disease—A total of thirty one cases of typhoid fever with three deaths was reported to the State Health Department from Elizabethville in Lykens Valley up to December 5——The epidemic of typhoid at Yeagertown still progresses and five new cases were reported on December 5 Analysis of the milk and water failed to show source of infection and it is thought that the Kishacoquilla Creek, practically a sewer ditch, is the cause of the outbreak, the infection being carried by flies——Two schools were closed in Chester for fumigation, December 4, because of diphtheria All public schools have been closed and Sunday School sessions prohibited for the present at Brownstown, because of an extensive outbreak of diphtheria

Housing Campaign—The Suburban Cooperative Planning Conference was held at the Bellevue Stratford, Philadelphia, November 20 Parts of four counties, embracing twelve townships of the first class, sixty six of the second and fifty two boroughs and two cities, Chester and Philadelphia, were represented Recent investigations have brought to light that certain "shanty towns" in Wayne, Bryn Mawr and Rosemont present conditions worse than city slums and that improper sanitation and inadequate housing have made settlements exceedingly menacing The purpose of the meeting was to provide for cooperative action for a comprehensive scheme of town development, an act being prepared for presentation to the legislature providing for the establishment of a state planning commission

Philadelphia

Favor Health Plan.—Four progressive measures that have been drawn up by Mayor Blankenburg's advisory committee to be introduced into the next legislature have been endorsed by the Society for the Prevention of Tuberculosis The proposed measures *will prohibit dry sweeping in public places*, the use of common drinking cup and roller towels, and make it necessary for fruit, meat and pastry exposed for sale to be covered

Money Pledged for New Maternity Hospital—The Federation of Jewish Charities has pledged the sum of $40,000 to the Jewish Maternity Hospital for the purpose of building a new hospital Payments of this sum are to be made as follows $5 000 to be paid when contracts have been signed or the erection of the proposed building, and not less than $5,000 every twelve months thereafter, until the above obligation has been fulfilled

Philadelphia Nurseries Discuss Pure Milk.—At the semiannual meeting of the Philadelphia Association of Day Nurseries, held November 21, and attended by presidents and delegates from each of the twenty three nurseries in and about the city, the importance of cleanliness in handling milk for children and the rigid scrutiny of all sources of supply were fully discussed Mrs William Frazier presided and reports were made by each of the nurseries of inspections of milk supplies in each of the districts More than 700 children are annually cared for by these institutions

VIRGINIA

New Officers—Petersburg Medical Faculty, sixty seventh annual meeting, November 22 president, Dr E L. McGill, secretary treasurer, Dr W C Powell

Open-Air School to be Opened—Plans presented by Dr Lawrence T Price, Richmond, for the operation of an open air school in that city, have been approved by the school board and the class will be opened in February on the roof of the new Madison Street School building

Public Health Association Meeting—The Virginia State Public Health Association at its meeting in Norfolk, October 25, elected the following officers Dr Powhatan S Schenck Norfolk, president, Drs O C Wright, Jarratt, and E F Reese, Courtland, vice presidents, Dr Lucien Lofton, North Emporia, secretary treasurer, and Dr W F Driver, New Market, assistant secretary treasurer

Opening of Medical College—The new home of the University College of Medicine, Richmond, was formally opened November 28, in the presence of more than 1,000 guests An unexpected feature of the opening exercises was the presentation of a silver service to Dr Stuart McGuire, president of the college, by Dr J Allison Hodges, his predecessor, on behalf of the board of trustees and the faculty

Personal.—Dr J M Burke, Petersburg chief surgeon of the Seaboard Air Line Railway, was presented by the surgeons of that line, with a handsome silver loving cup——Dr W M Tunstall, Lovingston who has been under treatment at the University Hospital Charlottesville on account of injuries received in a runaway accident, has recovered and returned home——Dr Charles R Robins has been elected a member of the school board of Richmond

The Public Health Propaganda—Lectures on public health and social betterment are to be made a more prominent feature of the work of the state board of education In furtherance of this design, officers and employees of the State Health Department have delivered lectures and made public speeches in practically every county and city in the state In addition, a list of lectures has been prepared by practitioners, publicists and directors, all of whom are available for lectures and addresses in various parts of the state, subject only to the payment of necessary expenses General lectures on the prevention of disease head the list There are addresses on tuberculosis, typhoid, hookworm the fly, school sanitation, municipal water and sewers, health organization, the waste of child life, registration of vital statistics mental defectives and social diseases The speakers directly under the state board are health commissioner, Dr Ennion G Williams, assistant commissioners, Dr Allen W Freeman, Dr Roy K. Flannagan and D S Freeman, J J Lloyd, Jr, K E Miller, W A Brumfield, A. C Fisher, L T Royster, W H Heck, Richard Messer, C E and W A Plecker In addition to the general health topics, lectures are available by speakers not under control of the board, but cooperating with it, on nursing disease and poverty, food inspection, pure milk, Virginia's feeble minded, eugenics and heredity, and oral hygiene and care of the teeth Among the speakers are the following President Edwin A Alderman, University of Virginia, Dr R W Garnett, Charlottesville, Dr E C Levy, Richmond, Dr W Brownley Foster Roanoke, Dr Powhatan S Schenck, Norfolk, Prof C G Maphis, University of Virginia, J D Eggleston, superintendent of public instruction, Dr Charles P Wertenbaker, U S P H Service Drs McGuire Newton, B M Rosebro C C Hudson, Stuart McGuire and Greer Baughman Richmond Rev James Buchanan, Richmond, Miss Nannie J Minor Richmond, Dr F M Perrow, Lynchburg, W D Saunders, state dairy and food commissioner, Peyton Rowe, dairy inspector, Dr J N Barney, Fredericksburg, Rev J T Mastin, secretary state board of charities and corrections Dr William F Drewry, Petersburg, and Prof H E Jordan, University of Virginia

WASHINGTON

New Offiers.—Snohomish County Medical Society at Everett president, Dr H P Howard, secretary treasurer, Dr L G Woodford, both of Everett.

Interstate Reciprocity—The recommendation of the Idaho State Medical Society that bills should be drafted that would bring about medical reciprocity between Oregon, Washington and Idaho was rejected by the King County Medical Society at its meeting in Seattle, October 21——The Snohomish County Medical Society has placed itself on record as approving the reciprocity proposal

Personal—Dr Helen B Babcock, Seattle, returned November 25, after a trip to the Orient——Dr A L Mathieu has transferred his office in South Bend to Dr F W Anderson of Pe Ell, formerly resident surgeon at the Northern Pacific Hospital, Tacoma On January 1 Dr Mathieu will Join Dr A. L Maclennan in the management of the Riverview Hospital, Raymond——Drs Ida Rebecca Lantz and E Howard Hopkins, Hillyard, have been appointed members of the Spokane County medical consulting staff

WEST VIRGINIA

Personal.—Dr H D Hatfield, Eckman, governor elect of West Virginia, who has been ill with pneumonia, is reported convalescent——Dr Elias W Woodruff, Dallas, was painfully injured by explosion of carbolic acid, recently——Dr G A David Summit Point, was operated on at Franklin Square Hospital, Baltimore, recently, for the removal of a cyst of the lower jaw——Dr Gist Palmer, Wellsburg, is reported to be ill at a hospital in Pittsburgh.

Tuberculosis Notes—It has been settled that the Belmont *County Antituberculosis* Dispensary will be located in Bridgeport——At the meeting of the West Virginia Antituberculosis Society, held in Wheeling, November 12, Dr R. D Roller Jr, Eccles, and Dr D B Roller, Charleston, were elected vice presidents, Dr I B Bullard, Charleston, was elected secertary Dr C A. Wingerter, Wheeling, chairman of the publicity and lecture committee and Dr Harriett B Jones, Wheeling president of the tuberculosis exhibit committee——The dispensary of the Ohio County Antituberculosis League, Wheeling, was formally opened, October 29 The dispensary is to be open on Tuesday and Saturday at 12 o'clock.

WISCONSIN

Small-Pox Closes School—Fourteen cases of small pox in La Crosse have caused the board of education to order the school in the infected district to be closed

New Officers—West Wisconsin District Medical Society at Eau Claire, November 27 president, Dr J V R Lyman, secretary treasurer, Dr E E Tupper, both of Eau Claire (reelected)——Fond du Lac County Medical Society, November 13, at Fond du Lac president, Dr L A Bishop, secretary treasurer, Dr Flora A. Read——Wisconsin Women's Medical Society at Milwaukee, November 13 president Dr Luella Axtell, Marinette, secretary treasurer, Dr Minnie Hopkins, Oconto

Personal—Dr P F Gaunt, Oconto, was operated on in Mercy Hospital, Chicago, November 6——Drs F V Evert, Retreat, and H C Maurer, Beloit, were recently operated on for appendicitis——Dr R. Lloyd Williams, Green Lake, has been appointed house physician to the Johnston Emergency Hospital Milwaukee——Dr Robert E Flynn La Crosse has been elected physician of La Crosse County——Dr A. S Gilles of the Sacred Heart Sanatorium, Milwaukee, has been appointed medical director of the Waukesha Moor Bath

Hospital Notes—At a meeting of the south side city physicians of Milwaukee, recently, the establishment of a new general hospital for that section of the city was considered, and a committee was appointed to confer with representatives of the South Side Civics Association regarding the enterprise——The Milwaukee Maternity Hospital Association has bought the lot on which the hospital building stands and expects to erect a new building on the site——Property on Prospect Street Appleton, has been sold to the county and will be reopened and remodeled as a maternity hospital early in the year——The new isolation hospital, at Eighteenth Avenue and Mitchell Street, Milwaukee, is completed and ready for occupancy

The Tuberculosis Conflict—The Wisconsin Antituberculosis Association has secured the provision of eight sanatoriums for second and third stage patients to care for 250 patients and proceedings regarding seven other sanatoriums are pending with county boards The association has also brought about the employment of twenty visiting municipal tuberculosis school nurses in cities outside of Milwaukee It has created sentiment for the installation of local expert health officers in two cases, the establishment of three open air schools, the medical inspection of schools in fifteen towns and the abolition of common drinking-cups and roller towels It has been largely responsible for securing the gift of the $32,000 Blue Mound Sanatorium to Milwaukee, for filling beds and a waiting list at the state sanatorium, *for the establishment of a* tuberculosis sanatorium and two visiting nurses in the Milwaukee Health Department and for making tuberculosis the best understood and most intelligently resisted disease in Wisconsin among children and the ignorant as well as among the most enlightened adults——The county board of Kenosha County has appropriated $20,000 for the erection of a tuberculosis hospital——The Outagamie County board has appropriated $20 000 for a county tuberculosis sanatorium——Dane County has selected the farm of the late Henry J Southerland, four miles south of Madison, as the site for its tuberculosis sanatorium——In Sheboygan County the county asylum farm has been selected as a site for the tuberculosis sanatorium——The Milwaukee County board has received a recommendation of the board of trustees of the tuberculosis hospital asking for an appropriation of $350 000 to build a tuberculosis hospital near the Milwaukee County Hospital for the insane——The Beaver County Board of Directors has voted $20 000 for a tuberculosis sanatorium——Fond du Lac County has appropriated $15,000 for the construction of a sanatorium and its maintenance for one year and an additional appropriation of $1 000 is required for the purchase of a new site for the building

GENERAL

New Leper Colony Planned—It is reported that it is the intention of the United States government to give aid to the establishment of a leper colony on the island of San Clemente off the coast of Southern California

Common Towel Banished.—A ndment to the interstate
quarantine regul mber 9, by the treasury
department, orders the common n
railroad cars, st ch
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21, by Drs

Mobile, B L Wyman, Birmingham, G C Savage, Nashville, H H Martin, Savannah, Ga , W W Crawford, Hattiesburg, Miss , and J M Jackson, Miami, Fla

Health League Recommended—Surgeon Charles P Wertenbaker, U S P H Service, stationed at Norfolk, has recommended to the Southern Sociologic Congress that it make the formation of health leagues one of the features of its work during the coming year Such a league has been established by Dr Wertenbaker at Norfolk, the aims of which are thorough sanitary inspection correction of sanitary abuses and lectures on sanitary and personal hygiene, food values, preparation of food, resistance of domestic waste, the cultivation of physical efficiency and the building up of resistance of disease

Lake Michigan Sanitary Association—At the annual meeting of the Lake Michigan Sanitary Association in Milwaukee, November 26 resolutions were adopted petitioning Congress to make an exhaustive investigation of the Great Lakes, supporting the enactment by Congress of the bill carrying $300 000, including $25,000 for Lake Michigan, now under construction, for the purpose of making investigation of the extent and of the injury inflicted by the pollution of the lake water on the health of the population of the lake region, and endorsing the report on sewage disposal submitted to the authorities of Milwaukee, and the efforts of the present administration of the city of Milwaukee to carry out the recommendations embodied in the report, and recommending its study and consideration by the health officers of the several cities on the Great Lakes

Personal—The Buchanan Medal, awarded by the Royal Society to Col William C Gorgas, M C, U S Army, chief sanitary officer of the Isthmian Canal Zone, was presented at a meeting of the society, November 30, and was accepted on behalf of Colonel Gorgas by the private secretary of the United States Ambassador ——Colonel Gorgas and staff sailed for Guayaquil Ecuador, December 4 where he will make an investigation of the sanitary condition of the port, at the request of the government of Ecuador ——Dr Carl Alsberg, a chemist in the Bureau of Drugs and Plants, has been appointed *chief of the board of chemistry of the Department of Agriculture*, a position which has remained vacant since the resignation several months ago of Dr Harvey W Wiley ——Dr Paul Preble, U S P H Service, has been directed to investigate the prevalence of tuberculosis, trachoma, small pox and other contagious diseases among the Indians of North and South Dakota ——Major Clyde S Ford, M C, U S Army, on duty at the American United States Embassy, Constantinople, is working energetically at the cholera camp at San Stefano

FOREIGN

Hygiene Exposition at Genoa, Italy—The international hygiene and maritime exposition to be held at Genoa, Italy, March 1914 is to have an Italian colonial exhibit which is to be made a special feature of the exposition from the historical and medical standpoints

Personal.—The Norwegian physician Dr C Frellsen, who has been a practitioner at Antwerp Holland, since 1877, recently returned to Christiania to live. His friends at Antwerp presented him with a purse of $5 000 when he left and gave him a souvenir address printed at the Plantin press which dates from the sixteenth century

LONDON LETTER

(From Our Regular Correspondent)

London, Nov 23 1912

The National Insurance Act The Crisis in the Profession at Hand

The special representative meeting of the British Medical Association has been discussing during the week the most momentous question that has ever been presented to the profession whether to decline service under the national insurance act or to come to some compromise with the government As stated in a previous letter, the great majority of the divisions of the association passed resolutions against working the act At this meeting a prolonged and animated discussion took place which as in previous meetings of the representatives showed the existence of two parties both indeed hostile to the act but one more uncompromising than the other After some discussion it was decided to select from the agenda the following resolution of the Bradford division as the one best suited for bringing the question to the point "That in the opinion of this representative meeting the regulations issued by the insurance commissioners and the latest proposals of the Chancellor of the Exchequer (described in my previous letter) are unworkable, derogatory to the profession and a positive danger to national health As a consequence the medical profession declines to undertake service under the act and regulations as at present constituted" It was suggested that the words "a positive danger to national health" were too strong and should be deleted This was done and the resolution was carried by an overwhelming majority An amendment to substitute the word "unsatisfactory" for "unworkable and derogatory to the profession" as being unnecessarily provocative was lost A discussion was then taken on a more conciliatory motion of the Norwich division "That the recent offer of the Chancellor of the Exchequer affords the British Medical Association an opportunity for conferring with him and with the commissioners as to the points on which the demands of the profession have not yet been met." After discussion the words "as to, etc," were deleted and for them were substituted the words "with a view to the settlement of the points on which the demands of the profession have not yet been met" As amended, the resolution was carried by a majority of 167 to 84 The representative of the Hereford division moved that a copy of the resolution be sent to the chancellor and that he be informed that "any further proposals of the government for meeting the grave objections of the profession shall receive the most careful consideration of the British Medical Association" –After discussion it was decided to take a card vote on this motion This revealed an extraordinary equality of divided opinion whether to enter into *negotiations or not with the government For doing so the* card vote was 9,292, against, 9,269, majority, 23 If the voting had been taken by constituencies the resolution would have been reversed by a slight majority ayes, 100, noes, 101 Ultimately it was decided to appoint five members to confer with the chancellor

HOSTILITY OF THE TRADE UNIONS TO THE PROFESSION'S DEMANDS

The executive board of the General Federation of Trade Unions has issued a statement that "The continued subordination of the general interests of the community to the financial *interests of the medical profession can be described only as* scandalous" This is a little remarkable when one considers that the policy of trade unionism in general is thus accurately described It is not so long ago since in the London dock strike the Union of Transport Workers attempted to hold up the food supplies of fourteen million people by stopping the unloading of the Thames shipping The reason for the strike was flimsy, for these workers though lowly skilled are highly paid Their leaders thought the time had come when they could dictate the terms on which transport from the docks was to be carried on But the practice of the most ruthless egoism and the preaching at the same time of altruism for other people has always characterized the labor leaders The following resolution has been sent to the Chancellor of the Exchequer

The executive board of the General Federation of Trade Unions representing an affiliation of 105 trade unions, emphatically protests against the continued attempts of the medical profession to exploit the national insurance act and to avoid any semblance of control by the insured persons or their representatives The board urges the pressing need for an immediate settlement of the dispute concerning medical attendance by the creation of a state medical service or by the transference to the credit of the approved societies of those amounts last offered for medical attendance and medicine, in order that neither the approved societies nor their members may suffer any further disadvantage or handicap through the refusal of the medical profession to accept the more than generous terms now offered"

A Tribute to American Medicine

In a letter to the *Lancet*, Mr Arbuthnot Lane has expressed his gratification at the recognition of Carrel's magnificent work by the bestowal of the Nobel prize and incidentally paid a warm tribute to American medicine To him the career of Carrel Frenchman though he may be by birth, is typical of the intense desire to progress which pervades America The American man of science devotes himself heart and soul to his work feeling that merit is the only road to success, and that if he does succeed he commands the love, esteem and admiration of his fellows in a manner that does not exist in the more complicated conditions of the Old World The more Mr Lane sees of America the more he is impressed by the determination of the members of its medical profession to occupy the van of progress by rendering themselves familiar with any advance in science and by combining among themselves to ensure a very high and progressive standard of knowledge Mr Lane concludes "America has every reason to be proud of its capacity to present to the moving spirits of the world a soil in which they can grow with uninterrupted and stimulated vigor, and in which merit and genius receive a recognition unequaled, I believe, elsewhere Carrel is a typical product of these conditions"

The Origin of Life

The recent address at the British Association by the president Professor Schafer, on the origin of life (abstracted in a previous letter) has naturally aroused criticism in scientific circles The veteran naturalist, Dr Alfred Russell Wallace, the codiscoverer with Darwin of natural selection, concludes an article on the subject as follows "In the whole vast world of life, in all its myriad forms, whether we examine the lowest types possessed of the simplest characteristics of life, or whether we examine the higher forms of life, we follow the process of growth from a single cell up to the completed organism, even to that of a living moving, feeling, thinking, reasoning being such as man himself, we find everything a stupendous, unceasing series of continuous motions of the gases fluids and solids of which the body consists These motions are strictly coordinated, and, taken together with the requisite directing and organizing forces, imply the presence of some active mind power The assertion that life is due to chemical and mechanical processes alone is quite unjustified Neither the probability of such an origin nor even its possibility has been supported by anything which can be termed scientific facts or logical reasoning"

Discussing the same question at the Chemical Society of London in an address on "The Discovery of Radio Activity Its Influence on the Course of Physical Science," Sir Oliver Lodge remarked that the great thing to avoid in science was negations Let them make and substantiate positive assertions It might be impossible to construct living matter out of artificially combined materials, but the attempt was quite legitimate, and no one could say that it would never be successful In so far as life demanded energy for its peculiar manifestations, a possible source of such energy might be suggested in the phenomenon of radio activity In the physical universe our power was limited to the movement of matter, all that happened after that was due to the properties of matter and of its ethereal environment If potentially living matter was ever artificially produced by placing things in juxtaposition and bringing natural physical resources to bear on the assemblage, which was all that we could do, then it might become alive But if this last step were taken it would be because something beyond matter, and outside the region of physics and chemistry, had stepped in and utilized the material aggregate provided, in the same way, presumably, as that in which it now steps in and utilizes the material provided, say, in an egg or a seed

The Government Inquiry Into Nostrums. The Failure of a Prosecution

At the last sitting of the committee of the House of Commons appointed to inquire into the present state of the law regarding the advertisement and sale of nostrums the important question arose as to the power under the existing law to prosecute venders Professor Dixon gave evidence to the effect that if the law were put into action the evil might be considerably mitigated as the Merchandise Act gave power to public authorities to prosecute in case of fraudulent misrepresentation, and he referred to a prosecution by the Liverpool corporation as an example When Dr E W Hope, health officer of Liverpool, was communicated with, however, he stated that in 1907 information was laid against a firm of pharmacists as the venders of a patent medicine (not their own preparation) on the ground that a false representation was made on the label The case was withdrawn, as no evidence of guilty knowledge on the part of the venders could be brought forward and the pharmacists were awarded $20 costs Further analyses had been made of patent medicines, but no local proceedings had been taken since

The Pasteurization of Milk Criticized

Dr Ralph Vincent, a pediatrist who has done a good deal of research work, seriously criticizes the prevalent practice of sterilizing and pasteurizing milk He states that as the result of bacteriologic work, experiments on animals and an extensive clinical experience, to treat milk by these methods is to destroy the very germ (*Streptococcus lacticus*) on which the wholesome state of the milk depends, and in the absence of which other putrefactive germs have full play, producing acute poisonous effects in the bowel of the infant, leading frequently to a fatal result especially during a hot season Vincent's remedy is a simple one viz never use anything but raw milk, cooled in the refrigerator immediately after milking to a temperature of about 35 F and sent out in receptacles fitted with an insulating air wall" so that there is no rise of temperature in its transit to the house of the consumer This method would lead to a slightly increased cost but it is asserted that this need not be large

Libel Action by a Nostrum Vender Against the British Medical Association

The publication of the book "Secret Remedies What They Cost and What They Contain" by the British Medical Association has naturally been much resented by the nostrum venders who, however, have not thought it wise to attempt any legal action At last, Stevens & Co, selling a nostrum as a cure for consumption has brought an action for damages This case, which occupied the attention of the court for a week, is most important as it shows the danger to which any one who endeavors to expose quackery is exposed under the present state of the law, in spite of overwhelming medical evidence of the justice of the strictures passed After referring in general terms to fictitious claims for inert nostrums the book goes on to say 'It is the victim's money that is wanted, therefore the price is fixed high and the advertisements written up to it Although Stevens is so engagingly candid about his rivals he follows the plan of sending one letter after another to any sufferer whose name he may have obtained, a system which seems to have been invented in America, it is certainly cheaper than bold advertisement in the newspapers, and is apparently more satisfactory, as it enables the vender to give individual attention to the depth of his correspondent's pocket The farce of revealing a formula by such fancy names as these is one of the oldest dodges of the quack medicine man and no such names as 'umckaloabo' and 'chijitse' appear in any available work of reference in pharmacy" Later the following description was given Stevens, C H, the proprietor of a remedy for consumption which has been put on the market in South Africa and England under the name of Sacco and later in South Africa as Lungsava, the recipe for which is stated to have been long in use among the Kaffirs and Zulus Stevens has acquired a number of testimonials from medical men who must now regret their precipitate action He is now in England on a new campaign" The remedy was described as "a clear red liquid containing in 100 fluid parts 21 3 parts of alcohol 1 8 of glycerin and 4 parts of solid substance This solid substance agreed in all respects with the solids of decoction of krameria or a mixture of this with a little tincture of kino"

For the plaintiff, Mr E M Holmes, curator of the Pharmaceutical Society of Great Britain and formerly lecturer for the society gave evidence that the plaintiff had submitted to him for examination two substances—a plant called chijitse, which he recognized as belonging to the natural order *Geraniaceae* and a root, called umckaloabo which, from microscopic examination he believed belonged to the *Polygonaceae* family Some analytical chemists also gave evidence that they had examined the plaintiff's remedy and found that it did not contain either krameria or kino Several doctors of no eminence whatever one of whom described himself as the "author of a number of letters to the *Lancet*,' stated that they had found the nostrum beneficial Stevens himself gave evidence that his mixture was made from the plant mentioned above which grew in South Africa and was used by the natives in the treatment of consumption and also from the root mentioned When Secret Remedies" was published he was doing a large business—$21,000 a year, after its publication his receipts dropped to $14.500 He had sent letters to thousands of physicians and had received thousands of letters from them, though often with requests not to publish their names On cross examination he admitted that the statement in one of his advertisements that he had gone through unexplored country in Africa and spent thousands of pounds to get the remedy was "exaggerated ' it was written by an advertising agent and he did not read it carefully For the defense a number of eminent specialists, Dr Theodore Acland, Sir Douglas Powell Dr Arthur Latham and others were called and stated that there was no evidence whatever that Stevens' mixture had any curative properties or contained any active principle capable of influencing consumption

Mr Justice Pickford in summing up said that the case was important, because if the plaintiff had been wrongfully accused he was entitled to be cleared On the other hand, it was important [illegible] Brit [illegible] ical Association should have a right to [illegible] of the jury did not necessarily involve whether the remedy was good or bad. The defendants had said in effect that the plaintiff claimed in his advertisements to cure advanced cases of consumption, although he knew he could not do so. If they proved that, they were entitled to a verdict. In his advertisements the plaintiff had claimed to cure every case of consumption. He also stated that he returned to England from South Africa "to prove his work to the satisfaction of the British government." This was inaccurate, because he returned to start a commercial enterprise. In another advertisement he said "It cost me many years of ceaseless toil to bring the remedy to its present state of perfection." He had given no evidence to that effect. In another advertisement he invited persons suffering from consumption to such an extent as "to consume all except the soul and the bones" to see him. Persons in the last stage would naturally pay anything. Did he honestly believe that he had a remedy which would then be effective? None of the physicians called by him had said anything which justified his claim to cure advanced cases. If he made claims which he knew were improper, then the defendants had proved what they said. If it was not quite true the defendants might have to pay damages. The jury disagreed and was discharged.

It is a melancholy fact that no matter how preposterous the claims for a nostrum may be physicians can always be found to swear that it has proved beneficial in their experience, but these are never men of any professional eminence. They are quite unknown to the general profession until they appear in the witness box.

PARIS LETTER

(From Our Regular Correspondent)

Paris, Nov. 15, 1912.

Population Statistics

The population of France during the first semester of 1912 shows in place of the excess of 18,279 deaths recorded during the first six months of 1911, an excess of 14,172 births. This is caused by a decrease in the death rate, for the birth rate has continued to decrease in spite of an increase in the marriage rate.

Formation of an Army Morphologic Laboratory

A laboratory of morphology has been founded at the Palais des Invalides. It is intended to permit the army to benefit by recent work on human morphology and to make use of soldiers for the study of anthropologic types.

Dr. Monprofit and the Balkan War

Dr. Monprofit, professor of clinical surgery at the Ecole préparatoire de médecine d'Angers has been invited by the Greek government to go to Greece to organize a sanitary service in the military hospitals. He has accepted on condition that his sojourn in Greece shall be only for a few weeks and that he shall remain free to return to France if European complications arise.

Foundation of a Municipal Museum of Hygiene

The city of Paris has just founded a museum of hygiene which includes a library of seven sections devoted to urban hygiene, the hygiene of dwellings, prophylaxis, the hygiene of foods, group hygiene, hygiene of transportation and social hygiene.

One Hundred and Fiftieth Anniversary of the National Veterinary School of Lyons

The one hundred and fiftieth anniversary of the foundation of the national veterinary school of Lyons has just been celebrated in that city. It is the oldest in France and perhaps in the entire world.

The Foundation of the International Bureau of Foodstuffs

As I have mentioned in a previous letter (The Journal, Nov. 2, 1912, p. 1637) the official delegates of the various governments represented at the international congress for the investigation of methods of analysis have decided on the creation of a permanent international bureau of analyses of foodstuffs, to be located in Paris, in recognition of the leading rôle taken by the French in the combat against adulteration of foodstuffs.

Unhealthful Houses in Paris

At the last meeting of the Société de statistique, M. Juillerat explained the working of the bureau which has in charge the sanitary condition of the houses of Paris. Since Jan. 1, 1894, account has been kept of the number of deaths from contagious diseases, especially pulmonary tuberculosis, in each house in Paris. In 1904, ten years after the records had been started, an abstract of the records was made which showed the distribution of tuberculosis in the houses. This showed that 38 per cent. of the total number of deaths had occurred in 5,263 houses. Certain sections and streets were responsible for two or three times as many deaths as occurred in the rest of the city. The officials decided then to employ means which the law of Feb. 15, 1902, had authorized for the protection of the public health, in an attempt to clean up those houses which were the active foci of tuberculosis and to make them healthful. The chief fault was the darkness of the living rooms. Up to 1908, the number of deaths from tuberculosis had been increasing. In 1907 and 1908 a total of 10,262 was reached. March 1, 1909, 549 houses, a little more than one tenth of the tuberculous houses, had been improved by having airless and dark rooms abolished. In 1909 the death rate from tuberculosis fell to 9,714. March 1, 1910, the number of houses made sanitary was 886 and the mortality fell to 9,449. March 1, 1911, 1,132 houses had been overhauled and the mortality had fallen to 9,371. This is real progress, and ought to justify the conclusion that the work of the bureau is responsible for the good results. Dr. Juillerat believes that the same system may be applied to other diseases, especially cancer, which seems to be similar as far as houses are concerned to tuberculosis, since one tenth of the deaths from cancer in the past five years have occurred in houses classed as tuberculous.

Responsibility of the Surgeon

A patient entered the Bichat hospital in the service of Dr. Lecène to be operated on for appendicitis. He was placed on the operating table, anesthetized with chloroform and washed with soap, alcohol and ether. These substances were then wiped off with compresses. At this moment, having perceived an acne papule which later might cause infection, Dr. Lecène asked for a thermocautery. In burning the papule he caused a severe accident, for some alcohol which remained blazed up, severely burning the patient. Several months later Dr. Lecène and the Assistance Publique were sued for 60,000 francs ($12,000). The tribunal named three experts, Professors Pozzi, Reclus and Duval, who decided that there was no professional fault. The burn had been caused by pure accident, led up to by the unsual conformation of the patient. The ether and the alcohol had been wiped away with dry compresses according to custom, but a deformity of the hip of the patient, caused by hip joint disease from which he had suffered when young, had caused a little alcohol to remain in the inguinal fold, which was unusually deep; besides, the patient did not lie flat on the table because the loins owing to ankylosis were unusually prominent, and the alcohol ran under his back and was absorbed by the linen which had been placed there. Notwithstanding the opinion of the experts, the court decided that though there may not have been professional fault there was at least negligence. Far from agreeing that the deformity of the patient justified an interpretation of the injury as accidental, the court decided that the surgeon, who must have noticed the deformity and who ought to have paid special attention to it, ought not to have let the thermocautery touch the patient until he was sure that no trace of alcohol remained on any part of the body, especially in the unusually deep inguinal fold, and under the back. The Assistance Publique was freed from blame, but Dr. Lecène was ordered to give the patient 15,000 francs ($3,000) damages.

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Nov. 15, 1912.

Personal

November 19, Professor Czerny, the well known Heidelberg surgeon, celebrates his seventieth birthday. He was born in Austria and studied medicine at Vienna. At first he devoted himself to ophthalmology, then he became assistant of Oppolzer and in 1868 assistant of Billroth. In August 1870, as Billroth's assistant, he went as volunteer to the Franco-Prussian War and distinguished himself mainly in the management of the hospital at Weisenburg. In 1871 he became connected with the faculty at Vienna, but the same year was called to Freiburg as director of the surgical clinic. In 1877 he became successor of Gustav Simon, director of the surgical clinic at Heidelberg. In 1906 he resigned his office of surgical instructor in order to devote himself completely to the foundation and management of the Heidelberg institute for cancer research.

Prof. A. Czerny of Strassburg, cousin of the Heidelberg surgeon, has received a call to the position of director of the Berlin pediatric clinic, as successor of Heubner On the list of those proposed for the appointment were the names of Professor Finkelstein of Berlin and Professor Salge of Freiburg, both pupils of Heubner According to all indications, Czerny will accept the position

At the request of the faculty, Dr Grotjahn has accepted a position as instructor in social hygiene, in this way the professorship of social medicine and hygiene, which is vacant as the result of the appointment of Kirchner as ministerial director, will at least be partly filled

Professor Wessely is temporarily in charge of the Würzburg eye clinic, whose director, Professor Hess, as I have already reported, has gone to Munich

Professor Kretz, director of the Würzburg pathologic institute, contemplates resigning his position

The title of "Excellency" has been conferred on Prof von Angerer, the well known Munich surgeon and private physician to the prince regent of Bavaria In Bavaria this distinction is conferred on medical men less frequently than in Prussia Prof von Leube is the only other physician in Bavaria who holds this title

Advertisements on Wrapping Paper Used by Pharmacists

Attention has been repeatedly called by physicians to the evils connected with the practice of having advertisements printed on the paper used by pharmacists and druggists in wrapping their goods These wrappers are, to a large extent, supplied without charge by manufacturers of medicines, food preparations, etc., and are covered with printed commendations of their product In this way they secure efficacious advertising before the public, and the pharmacists and druggists are willing to lend a helping hand as accomplices, because in this manner they get the wrappers free Physicians are interested in the elimination of this evil, as the public is led by such advertising to self treatment After attention was called to this fact at the last year's *Aerztetag*, as I reported at that time, the *Deutsche medizinische Wochenschrift* took an especially strong stand against this evil Fortunately, the board of directors of the German Pharmaceutic Association has recommended to its members not to use any more such wrapping paper Recently also the society of drug manufacturers has recommended similar abstention to its members In the resolutions adopted it was also advised that with pharmaceutic preparations there should not be included explicit advice as to self treatment, physician's reports, physicians' statements as to the results of the treatment, and testimonials [A fatality from this cause has recently been reported in Germany The purchaser took the medicine according to the directions found on the wrapper around the bottle, which were in the advertisement of an entirely different remedy]

Russian Students

As I reported some time ago, the medical students of Munich took strict precautions against the overcrowding of the local clinics with Russian students, especially undesirable ones Recently a St Petersburg daily newspaper harshly criticized its countrymen as revolutionary and lacking in regard for the most elementary requirements of decency Following this, the Berlin *Vossische Zeitung* asked a number of local professors, among them Hertwig, Hildebrand and Waldeyer, to express their opinion Almost all directly contradicted the insulting statements of the Russian newspaper Hertwig also states that Russian medical students in general are diligent, and that he knows of no misconduct on their part So far as the treatment of native students by the Russians is concerned no complaints worth mentioning have come to his knowledge He says that the German student regards it as an honor for a large university to attract foreign students, and thus to bring recognition of German culture also outside of its own empire

Reform in the Advertising of Medicinal Articles

In a similar manner as by the control of advertising of remedies in the medical press and by the rejection of objectionable advertisements (in regard to which I informed you in my last letter) the medical press will suppress the advertising evil which is carried on by the distribution of special reprints of articles on therapeutics It is found that manufacturers of therapeutic products distribute special reprints in which the sections giving unfavorable effects of the described remedy are suppressed, while, on the other hand, statements in favor of the product are made specially conspicuous Further, favorable reports on remedies are distributed after the statements have been recalled as experience has modified the first impressions The association of the German medical press therefore passed resolutions at its last meeting declaring that special reprints must be an unchanged copy of the original work Individual portions must not be made conspicuous for the purpose of advertising, and it is not allowed to make additions or omit certain parts The reprints supplied to a certain firm may be distributed only with the consent of the author, at first only to the end of the third year following the publication For the further distribution a new consent of the author is necessary An industrial firm may be furnished with a supply of special reprints in regard to a remedy only on the manufacturer agreeing not to distribute such reprints to the laity It remains to be seen how authors, editors and the chemical manufacturing firms will adapt themselves to these requirements

Instructions in Legal Medicine for the Police

Professor Ziemke of Kiel has established a course of medicolegal instruction for the local police to instruct them in medicolegal questions which must be considered on discovery of crime

Discreditable Remuneration in Contract Practice

A publication of the medical officers of the insurance societies in one of the larger Bavarian cities shows how just is the complaint of physicians in regard to the insufficient compensation from the Krankenkassen Of the total appropriation of 322,507 marks for the first half of 1912, for physicians, medicines and remedies, and sick benefits, physicians received only 19,567, that is 6 07 per cent The expense of management of the eight societies in the contract (one local Krankenkasse, four trade Krankenkassen and three free aid societies) will probably be not much lower! The most busily engaged physician received for each individual case (not for the individual service) for half a year 1 73 marks (43¼ cents) In this are included visits up to a distance of two kilometers (a mile and a quarter) More money was paid out to dentists than for special surgical and obstetric services, and for visits more than two kilometers distant

The city street railway company at Munich has announced that positions for four medical officers were open The total amount appropriated for these four positions is 3,600 marks, or 900 marks for each ($225), which is less than a street car conductor receives For this the medical officer will have to examine each man for the acuteness of vision, the sense of color, hearing, nervous system, etc., and give his professional judgment as regards the applications of the sick for leave of absence and stay in the country, and take care of the necessary yearly examination of the railway employees as well as the workmen employed in the varnishing department However, as a sufficient number of physicians have applied, who have not calculated any further or who have not asked regarding the salary, and as also the organized profession has not expressed any opinion on the subject, the city street railway will get its cheap help

The Medical Member of the Berlin City Council

A salaried city medical councilor with the function of a regular member of the city council was authorized at the last session of the common council of the city of Berlin The salary is at first to be 15,000 marks ($3,750), which shall be increased after three years to 18,000 marks ($4,500) (This important innovation was discussed in the Berlin Letter, November 9, p 1730)

VIENNA LETTER

(From Our Regular Correspondent)

Vienna, Nov 20, 1912

Sixth International Congress for General and Medical Electrology and Radiology

This congress, held in Prague during the first week of November, was attended by about 700 members About 130 papers were read. It was impossible to exclude political and racial enmities from even this purely scientific meeting, for Prague is the hotbed of our deplorable political difficulties Therefore German scientists were ready to boycott the congress, but at the last moment a public clash was averted It was not the fault of those who had charge of the meeting that political feeling was exhibited The members were welcomed by the government and the municipality and the social entertainments were of the customary types in such instances Of the many interesting papers the following are worthy of notice Professor Stoklasa of Prague spoke on the Influence of Radio Active Substances on the Development of Plants" He had worked with pitchblende containing in 1 kg only 0 000136 gm of radium He used from 0.5 to 1 gm (7½ to 15 grains) of pitchblende enclosed in a glass tube and placed in the flower pots By these means he could increase the productivity of the plants by from 50 to 70 per cent If radio active water be used, the best results are obtained with water containing 600 Mache units, as the plant embryo is awakened more quickly and the semen begins to develop with greater energy In some instances the gain was 100 per cent compared with ordinary water It was found that photosynthesis of the carbohydrates in the cells with chlorophyl is increased by radio activity This might be used in future farms on a scientific base Similar experiments were conducted by Professor Doumer of Lille, France He used emanation, plants in this gas were made to grow more quickly, all the other conditions (temperature, humidity) being equal The growth of wheat especially was increased

Professor Mezernickyi of St Petersburg, read an instructive paper on "Chemical Actions of Radium Emanation" The chief result of his experiments is the fact that purin bases are dissociated by emanation He therefore emphasizes the hypothesis of His, that uric acid can be dissociated by radium, this was formerly doubted by many authors Uric acid is broken up into carbon dioxid and ammonia He further could show that 29 mg of sodium urate were dissociated by radium emanation within twelve days Bertolotti of Turin, Italy, has examined various radio active substances from a therapeutic point of view He found that actinium and mesothorium are even more energetic in destroying living tissues than radium itself Ghilarducci of Rome has treated diabetes mellitus with emanation He claims that in several cases this resulted in a disappearance of sugar from the urine The use of radio active waters and emanation in the Bohemian baths was described in a paper by Drs Pelc and Trema They have examined the springs of all the Bohemian spas, including Karlsbad and Joachimsthal, and gave in their paper details relating to the inhalation and drinking cure of the various places, as well as descriptions of the bathing establishments

Dr Manabe of Tokio described the Japanese radio active baths The Japanese make a large hole in the ground where radio active waters appear and the baths are taken there and *then This prevents the loss of emanation so frequent in the* European baths

The Surgical Use of Radio Activity" was the title of a paper by Professor Sticker of Berlin He employs radium combined with mesothorium for malignant growths, accessible to this treatment with satisfactory results A paper by Messrs Degrais, Wickham and Slavik of Paris dealt with the same subject The authors have been working on the *treatment of* cancer by radium for four years They assert that it is possible to benefit also internal cancer by permanent application of radium in tubes

The influence of alkalies in the conductivity of the blood was investigated by Professor Trunecek of Prague He has found that electricity is conducted in the blood not by the water or by its organic substances but simply by its mineral salts The latter are dissociated by the electric current into the basic and acid components which are the real carriers of electricity Trunecek has made a serum out of the salts contained in the normal blood plasma which, he says, are useful in cases of hypertension and arteriosclerosis or when the viscosity of the blood has increased owing to the accumulation of acid products of metabolism The application of high frequency high tension currents was shown and described by Professor Etcheverria of Santiago Chile He has invented an apparatus permitting application *of the strongest currents on the human body with impunity He uses this method of treatment in* certain psychoses and brain diseases and reports good results with this novel method Dr Bonnefoy of Cannes states that his observations on the physiologic action of high frequency currents have convinced him of their calming action on the circulation although the rapidity of the blood stream is increased and the peripheral warmth is raised

A remarkable paper which caused much discussion and criticism was read by Cirera Salse of Barcelona, who reported that he had cured appendicitis by galvanization and electrolysis He also pointed out that electrolysis has a great future in the treatment of exudations and inflammations of the pelvic organs In another paper on the treatment of malignant growths Wickham of Paris gave details of his method of attacking the newly formed tissue the essentials being the application of the radium at the base and around the periphery of the growth and the use of large doses so that destruction of cells is surely obtained, it must be kept in mind *that a* weak application cannot be compensated or strengthened by the duration of the exposure to the radium It is advisable to influence all parts of the tumor in an equally strong degree.

Professor Becquerel read a paper on "Radio Activity and Biology" Although at first it was thought that all life was accompanied by radio activity, exact investigations have proved that radio activity is rather detrimental to life, some rays even being directly fatal to cells Thus the *x* rays, consisting of positively charged particles and possessing a velocity of 20,000 km per second, are most abiotic, while the beta rays, *consisting of negative particles (like the cathode rays)* and having the highest penetrative power, are about equally dangerous to life Their chemical action is similar to that of the ultraviolet rays of very short undulations Interesting data were found by Strutt in his investigations into the age of life in the universe He has found that a mineral contains the more helium the older it is The same holds good of fossils *from various geologic periods The alluvial deposits on the* rocks of Ontario enabled the scientist to reckon out, under these suppositions, the age of the first oceans inhabited by living organisms as over six hundred millions of years Since then, evolution had time to take place in the course of the geologic periods

Although the congress was intended not only for medical men but also for all those interested in electricity (numerous papers being read on wireless telegraphy and on problems of electric traction and light), the majority of the members belonged to our profession It was a success as it was possible to attract the attention of the whole civilized world, and at the final meeting it was decided to hold another congress in two years The meeting place will be chosen next year

Definite Regulation of the Relations Between Dentists and Technicians

The long conflict between the surgeon dentists and the technician-dentists will soon be a matter of the past According to a bill recently proposed by the government, in the future only graduated physicians will be entitled to practice dentistry in Austria The technical assistants will be permitted to work only in cooperation with or as subordinates to physicians The profession of technical dentists (*Zahntechniker*) will be *allowed to die out The law makes certain temporary* concessions to those technical dentists who at present are practicing in this country under the technical license Thus they will be entitled to remove or to fill carious teeth if it is absolutely necessary in the process of substituting a denture, bridge or crown work, but they must not use an anesthetic or do anything that requires profounder medical knowledge Medical men protest vehemently against this permission of surgical dentistry to non medical men, while the technicians, on the other hand, demand that for the future all technicians should be able to obtain an extension of license by passing certain examinations in order to be permitted to do minor surgery in the mouth The bill will put an end to the bitter conflict Already on these grounds a few years' charges against technicians have been dismissed

Professor von Pirquet on Diseases of Childhood in School

The well known specialist for diseases of children recently read before the Society for Hygiene of the School an interesting paper dealing with the diseases of school children He finds that school diseases can be classified under one of the following heads infectious diseases, disturbances of development of the body and degeneration The surroundings are frequently responsible for disturbance of development Well fed children grow more rapidly and better than underfed children Instruction in hygienic principles is of the utmost importance. The chief object of the Society for Hygiene of the School must be to make public the results of the united experiences of parents *teachers and school physicians in order that a healthy and* strong generation of children may grow up to be healthy citizens

Improved Facilities for Veterinary Surgeons

Owing to the boycott organized about a year ago by veterinary students against the veterinary school, the government has found that it is no longer possible to neglect the just demands of the students Just now veterinary surgeons are in more demand than ever before, partly on account of the threatening war Thus the government has consented to admit veterinary surgeons into the army under conditions similar to those open for physicians The school will be endowed with sufficient funds for obtaining ample material for dissecting work, scholarships will be instituted in the school and a *completely new equipment with sufficient space for study is being* added to the veterinary hospital existing at present All endeavors are being made to obtain first class teachers for the students.

Miscellany

Disinfection of Schoolrooms.—Better knowledge of the manner in which infectious diseases are transmitted has shown the importance of contact infection. As the ordinary communicable diseases are more prevalent among children, especially school children, the importance of adopting measures to minimize the dangers of contact infection among them is apparent. In addition to the medical inspection of school children and the isolation of suspects or carriers, the frequent disinfection of schoolrooms is an important preventive of the dissemination of infectious or contagious diseases. At the Fifteenth International Congress on Hygiene and Demography, J. T. Ainslie Walker read a paper on the routine disinfection of schools, which, after giving the results of investigations concerning the rôle of school children in the transmission of infectious diseases to other members of the family, he summarizes as follows: The presence of a certain proportion of infectious children is admittedly unavoidable. These infectious children must diffuse a certain amount of infective material, the removal of which by means of frequent and thorough washing of schoolrooms and cloak rooms is, on the ground of expense, impossible, or is at least so regarded by the educational authorities. He, therefore, offers the following plan, not as a panacea, but as a reasonably efficient measure in keeping down the occurrence of infectious diseases transmitted by the contact of school children. When the school is over for the day the floor of each class room should be moistened with a disinfectant solution, such as 1 part of pure phenol to 25 parts of water, by means of an ordinary sprinkling can with fine holes, and swept in the usual manner while still damp. Desks and seats should be dusted with a cloth sprinkled with the same solution. Dry dusting and sweeping should on no account be permitted. Once a week the walls to a height of 6 or 7 feet from the floor should be moistened with the same preparation by means of a spraying machine, seats, desks, hat and cloak pegs should be treated in the same manner and all inaccessible places where dust accumulates should be thoroughly wet with the solution. Every quarter the spraying operation should be extended to include all parts of the walls and ceiling. Walker says that the evil effects of breathing dust filled with bacteria cannot be gauged solely by the actual illness occurring among students. Many minor ailments so contracted may be too mild to warrant absence from school or call for immediate treatment, and Walker regards the method of disinfection by gas or fumigation ineffective. As an argument in favor of greater precautions in disinfection of schools, he says that as children are legally forced to attend school it follows that they should be protected to as great an extent as possible from disease by the most effective practical measures we have at hand. The Journal is disposed to wonder as to the reception which would be given to this mode of disinfection. The continuous odor of phenol throughout the school building, which would perhaps be even carried home in the scholars' clothing, might arouse protest which would interfere with the carrying out of the plan.

Relation of Eugenics to Euthenics.—Of late years several nations have been viewing with alarm their rapidly diminishing birth rates. It has not been generally recognized, however, wherein the danger really lies. The fact of a decreasing population may in itself be of serious economic import, and even though the total population is being maintained or is growing on account of immigration, accession from without then means the swamping of the native stock. But immigration aside, the greatest cause for alarm is revealed on an analysis of the statistics on the decrease in the number of children born. Such analysis shows that the decrease is not proportional for the total population, but that it is greatest among those classes of society which are the more desirable, namely, the professional classes, the artisans and the so called middle classes generally. Statistics show that whereas in London the birth rate was higher sixty years ago among the classes just mentioned, fifty years later the conditions had become exactly reversed, and that the paupers, the defectives and the undesirable generally were reproducing at a greater rate than the other civic elements. The outcome of such a state of affairs without the intervention of other forces, would be easy to predict. One modifying factor exists in the differential death rate, which falls most heavily on the physically and morally unfit, but here again the statistics have shown that this factor is not sufficient as a corrective. Is not this a fertile land for eugenic search? And may the eugenist not hope to offer suggestions of value? It may be some time before we can hope to do much directly to stimulate the birth rate among the better classes, but is it not time that steps were taken to check it among the worse?—L. J. Cole in *Pop. Sc. Month.*

"Essential Nephralgia."—L. Billon contributes a long article to the *Archives Provinciales de Chirurgie* (1912, xxi, 521), on the question whether there is such a thing as essential nephralgia, that is, pain in the kidney without an essential cause. He reports two cases which apparently belonged to the category but in which the pain was finally traced to abnormal movability of the kidney or other cause, and he is convinced that patient search will reveal a cause in all such cases. He reviews the differential significance of the character and site of the pain, a history of trauma, etc., and discusses the clinical pictures of latent nephritis, perinephritis, liver and pancreas disease, etc., liable to induce pain in the kidneys, and remarks in conclusion that the results have always been fortunate in the cases of the so called essential nephralgia in which operative measures were applied, some condition was invariably found which explained the pain and which was cured by the operation.

Marriages

James A. Rusmisell, M.D., Buckhannon, W. Va., to Miss Anna L. McNutt of Sutton, W. Va., at Clarksburg, W. Va., November 21.

Frederick M. Poindexter, M.D., to Miss Florence Grace Graeter, both of Dillon, Mont., at Argenta, Mont., November 21.

Harry Glenville Tonkin, M.D., Martinsburg, W. Va., to Miss Mary Lillian Licklider, at Martinsburg, November 28.

Earl William Cauldwell, M.D., Lemont, Ill., to Miss Kathryn Smollen of Hazeldell, at Lemont, November 28.

Robert Glendenning Washburn, M.D., to Mrs. Grace Watrous Foster, both of Milwaukee, Wis., November 28.

Frank Ira Bishop, M.D., Williamstown, N. Y., to Miss Florence Morphy of Brantford, Ont., November 18.

Arthur Madison Phillips, M.D., to Miss Lynnie Susan Whitaker, both of New York City, November 27.

Harry L. Pelle, M.D., Louisville, Ky., to Miss Clara E. Wilson of Shortsville, N. Y., November 23.

Michael Albert Abrams, M.D., Baltimore, to Miss Marie Silberstein, at Baltimore, November 28.

George Earl Henton, M.D., to Miss Bertha Anna Hacker, both of Friend, Neb., November 13.

Jacob Liencester Shirley, M.D., to Miss Ethel J. Mathews, both of Dawson, Ga., November 3.

William C. F. Witte, M.D., Milwaukee, Wis., to Miss Lillian E. Barr of Chicago, November 28.

Thomas A. McGoldrick, M.D., to Miss Rita Connell, both of Brooklyn, N. Y., November 27.

John Louis Schwer, M.D., to Miss Georgia Isherwood, both of Pueblo, Colo., November 28.

Abraham Ezra Jaffin, M.D., to Miss Matilda Serge, both of Jersey City, N. J., October 8.

Charles Rehling, M.D., Fremont, Wis., to Miss Ostrander of Milwaukee, November 20.

Oliver S. Lloyd, M.D., to Miss Golda L. Pearce, both of Baltimore, November 28.

E. Agnes Scott, M.D., and Willard Brandon, both of Denver, Colo., November 10.

Morris Wenger, M.D., to Miss Tillie Ullman, both of Reading, Pa., November 28.

Deaths

Edward Curtis, M D University of Pennsylvania, Philadelphia, 1864, a member of the Medical Society of the State of New York, and American Association for the Advancement of Science, brevet captain and major U S Army, during the Civil War, one of the first to make microphotographs and astronomical photographs, who was placed in charge of the microscopic department of the Army Medical Museum after the Civil War, where he remained until his resignation in 1870, professor of materia medica and therapeutics in the College of Physicians and Surgeons, New York City, from 1873 to 1886, and thereafter professor emeritus, microscopist to the Manhattan Eye and Ear Infirmary, surgeon to the New York Eye and Ear Infirmary, president of the New York Ophthalmological Society, a trustee of the New York Dispensary and medical director of the Equitable Life Insurance Company from 1876 to 1904, died at his home in New York City, November 28, from cerebral hemorrhage, aged 74

John Dale McGill, M D University of Pennsylvania, Philadelphia, 1870, a member of the American Medical Association and Association of Military Surgeons of the United States, medical director and visiting surgeon to St Francis Hospital Jersey City, local surgeon of the Pennsylvania and Erie systems and chief surgeon of the North Jersey Street Railway Company, for several years president of the Hudson County Medical Society, for twenty six years surgeon general of New Jersey, at one time police commissioner, president of the board of finance, president of the board of education and president of the Hudson County National Bank, died at his home in Jersey City, November 28, from arteriosclerosis, aged 65

Elizabeth Catherine Keller, M D Woman's Medical College of Pennsylvania, Philadelphia, 1871, after her graduation a member of the faculty of her alma mater, from 1875 to 1877 senior physician at the New England Hospital for Women, Boston a member of the New England Medical Society and for several years a member of the Boston school board, died at her home in Jamaica Plain Boston, November 29, aged 75

John Ely Brackett, M D George Washington University, Washington D C, 1870, a member of the Medical Society of the District of Columbia, for many years professor of practice of medicine and later professor emeritus of the principles and practice of medicine in Howard University, died at his home in Washington, December 3, from cerebral hemorrhage, aged 65

Adelbert John Douglass, M D Long Island College Hospital Brooklyn, 1872, a member of the Medical Society of the State of New York, a member of the staff of Ilion Hospital and one of the oldest practitioners of Herkimer County sometime president of the village of Ilion and a member of the board of education, died at his home, November 19, from pneumonia aged 75

Edwin Fletcher Ward, M D College of Physicians and Surgeons, New York City 1861, a member of the Medical Society of the State of New York, surgeon of the Twenty Eighth Massachusetts Volunteer Infantry and later on the staff of General Sheridan during the Civil War, died at his home in New York City, November 23 from arteriosclerosis, aged 76

Edward John Kiepe, Jr, M D University of Buffalo, N Y 1897 a member of the American Medical Association, adjunct professor of materia medica and pharmacology in his alma mater, was found dead in a hotel in Kansas City, November 23 from the effects of poison believed to have been self administered with suicidal intent, aged 40

Lee Balfour Slauter, M D College of Physicians and Surgeons New York City, 1882, for thirty years a practitioner of Fort Worth Tex, died in his office, November 22, from the effects of a gunshot wound of the head, self inflicted, it is believed, with suicidal intent, while despondent on account of business worries aged 54

George Gerald Allred, M.D Medical College of Indiana, Indianapolis 1905 of Danville, Ind, a member of the American Medical Association coroner of Hendricks County from 1908 to 1912 died in the Methodist Episcopal Hospital Indianapolis, November 26, after an operation for appendicitis, aged 30

Charles H Philpott, M.D University of Iowa, Iowa City 1882 vice president and director of the Des Moines Life Insurance Company, died at his home in Des Moines, November 25, from nephritis, aged 52

Thomas A Boggan, M D Memphis Hospital Medical College, Memphis, Tenn, 1896, of Tupelo, Miss, a member of the Mississippi State Medical Association, health officer of Lee County and for several terms a member of the legislature, died while making an address in a school at Mooresville, November 20, aged 65

George Ebenezer Francis, M D Harvard Medical School, 1863, a member of the Massachusetts Medical Society, assistant surgeon in the Navy throughout the Civil War, consulting physician to the Worcester City and St Vincent's hospitals, died at his home in Worcester, November 20, aged 74

John T Hawkins, M.D University of Louisville, Ky, 1881, a member of the Arkansas Medical Society, of Mount Holly, aged 57, was thrown from his horse while making a professional call near Mount Holly, November 20, and, his foot catching in the stirrup, was dragged to death

Abraham Lincoln Fox, M D Rush Medical College, 1882 of Danville, Ill, a member of the American Medical Association, died in St Elizabeth's Hospital, Danville, November 28, from acute nephritis, for which an operation had been performed two days previously, aged 54

John E Bruere, M D Washington University, St Louis, 1858, surgeon of United States Volunteers during the Civil War, formerly a practitioner of St Charles Mo, but for the last five years a resident of New York City, died at his home, November 22, aged 75

Thomas Mifflin Butler, M.D Eclectic Medical Institute, Cincinnati, 1857, formerly a practitioner of Pecatonica, Ill, for twelve years circuit clerk and recorder of Winnebago County, died at his home in Rockford, November 28, from cerebral hemorrhage, aged 79

Lewis Nelson Davis, M D Miami Medical College, Cincinnati, 1873, of Farmland, Ind, a member of the American Medical Association, president of the Farmland State Bank, died in Harper Hospital, Detroit, Mich, October 3, after a surgical operation, aged 63

Alvin Matthew Cushing, M.D Homeopathic Medical College of Pennsylvania, Philadelphia, 1856 formerly a member of the staff of the Wesson Memorial Hospital, Springfield, Mass, died at his home in that city, December 1, from cerebral hemorrhage, aged 83

Angus MacOdrum, M D Jefferson Medical College, 1900, a member of the American Medical Association, for many years connected with the Cambridge (Mass) Relief Hospital, died at his home in Cambridge, November 23, from cerebral hemorrhage, aged 47

Philip McNab, M.D Long Island College Hospital, Brooklyn, N Y, 1863, contract surgeon U S Army during the Civil War, an expert in medicolegal chemistry, died at his country home near Mooresville, Ind, about November 29, from pneumonia, aged 79

William H Jenney, M.D Cleveland Homeopathic Medical College, 1862 a member of the hospital corps of the Army during the Civil War, first secretary of the Missouri State Homeopathic Medical Society, died in San Diego, Cal, October 19, aged 72

Asbury J Russell, M D University of Wooster, Cleveland, O, 1868, medical officer of volunteers during the Civil War, of Oakland Cal, formerly a trustee of Merritt Hospital, died in Grass Valley, Cal, November 26, from cerebral hemorrhage, aged 67

Edward Wright Smitheman, M D University of Pennsylvania, Philadelphia, 1898, of Oil City, Pa, a member of the American Medical Association, died at the home of his parents, in Philadelphia, November 27, from tuberculosis, aged 37

William D Stumbaugh, M D Baltimore University, 1897, of Lacona, Ia, died in that place, November 21, from the effects of a gunshot wound of the head, self inflicted, it is believed, with suicidal intent, while mentally deranged, aged 53

Harry Milton Ferguson, M D Rush Medical College, 1890, of Morris, Ill, a member of the American Medical Association and secretary of the Grundy County (Ill) Medical Society, died November 19, from rheumatism, aged 43

Maurice Francis Sullivan, M.D Dartmouth Medical School, Hanover, N H 1886, for many years a practitioner of Southington, Conn, died at his home in Brooklyn, N Y, November 29, from cirrhosis of the liver, aged 48

D L Benson, M.D St Louis Eclectic Medical College, 1883, died suddenly in a store near his home in Mountain Grove Mo, November 23

John F. Cherrington, M.D. Marion Sims College of Medicine, St. Louis, 1895; died at his home in Denver, November 27, from the effects of poison, believed to have been self-administered with suicidal intent, aged 48.

H. J. Salley, M.D. Medical College of Georgia, Augusta, 1885; formerly president of the Bank of Salley, S. C., and a member of the board of education; died at his home, November 22, from cerebral hemorrhage, aged 52.

William Campbell (license, years of practice, Illinois, 1878), for many years a practitioner of Equality, Ill.; died at the home of his son in Danville, Ill., November 20, from accidental strangulation, aged 70.

Carlisle Milton Southard, M.D. Ohio Medical University, Columbus, 1902; a member of the Ohio State Medical Association; died at his home in Zanesville, O., November 21, from heart disease, aged 37.

Eliphalet Comer Baldwin, M.D. University of Colorado, Boulder, 1897; a member of the legislature from Custer County in 1910 and 1911; died suddenly at his home in Westcliffe, November 26, aged 36.

Walter Henry Tobey, M.D. New York Homeopathic Medical College, New York City, 1874; died suddenly in his automobile in front of his home in Boston, November 23, from heart disease, aged 65.

Merchant Charles Fargo, M.D. Rush Medical College, Chicago, 1912; intern in the House of Correction Hospital; died November 26, from shock, two days after an operation for hernia, aged 27.

Richard J. Brady, M.D. Jefferson Medical College, 1909; of Hastings, Minn.; deputy coroner of Dakota County; died in St. Johns Hospital, St. Paul, November 26, from pneumonia, aged 28.

Henry Diers, M.D. St. Louis College of Physicians and Surgeons, 1882; for twenty-five years a practitioner of Kansas City, Mo.; died at his home, November 28, aged 78.

Ernest Duval, M.D. Laval University, Quebec, 1884; formerly a member of the city council and school board of Rochester, N. H.; died at his home, November 23, aged 52.

Charles W. Hume, M.D. Detroit (Mich.) Medical College, 1876; of Corunna, Mich.; died in the Petoskey (Mich.) Hospital, November 22, from heart disease, aged 63.

Alexander W. Gray, M.D. University of Tennessee, Nashville, 1890; for fifteen years a practitioner of Pauls Valley, Okla.; died at his home, November 15, aged 58.

Eva Viola Mead, M.D. University of Buffalo, N. Y., 1900; a member of the Medical Society of the State of New York; died at her home in Buffalo, November 20, aged 41.

Celestia D. Messinger, M.D. Bennett Medical College, Chicago, 1883; for many years a practitioner of Chicago; died at her home in Brooklyn, December 5, aged 70.

Nathan G. Reiff, M.D. Hahnemann Medical College, Philadelphia, 1883; died at his home in Albion, Ind., November 26, from acute disease of the throat, aged 53.

Alice Bunker Stockham, M.D. Chicago Homeopathic Medical College, 1882; formerly of Chicago; died at her home in Alhambra, Cal., December 2, aged 79.

John W. Barry, M.D. Eclectic Medical Institute, Cincinnati, 1905; formerly of Springfield, O.; died at his home in Cincinnati, November 25, aged 31.

Jesse Bertram Wiley, M.D. College of Physicians and Surgeons, Chicago, 1902; of Osmond, Neb.; died suddenly at Pierce, Neb., November 4.

Samuel McCloskey Cleveland, M.D. Hahnemann Medical College, Philadelphia, 1875; died at his home in Philadelphia, November 23, aged 75.

Dennis Jerome Sullivan, M.D. Bellevue Hospital Medical College, 1876; died suddenly at his home in Providence, R. I., October 20, aged 62.

Griffin T. Dailey, M.D. College of Physicians and Surgeons, Baltimore, 1884; died suddenly at his home near Romney, W. Va., November 22.

Russ R. Roberts (license, Arkansas, 1903), of Brookland, Ark.; died in Nettleton, Ark., November 18, from typhoid fever, aged 38.

Francis Findlay, M.D. University of Buffalo, N. Y., 1860; of Franklinville, N. Y.; died in Parkville, Mo., October 3, aged 78.

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

BAUME ANALGÉSIQUE BENGUÉ

A physician writes asking for the formula of Baume Analgésique Bengué. This product is another of the "patent medicine" 'ethical proprietary" type of nostrums. In Great Britain, it is advertised to the public as "A Wonderful Remedy for Rheumatism, Gout, Neuralgia." In this country, the exploiters find that space in cheap medical journals, reinforced by the aid of undiscriminating physicians, is a cheaper method of getting the stuff to the public. According to the statements of the manufacturers, Bengué's Analgesic Balm contains "menthol, salicylate of methyl and lanolin." When analyzed by the chemists of the British Medical Association, it was reported to have the following composition:

Menthol	18 per cent.
Methyl salicylate	20 per cent.
Lanolin anhydrous	54 per cent.
A fat apparently lard	8 per cent.

The estimated cost of the ingredients of a 50-cent tube of Bengué's Analgesic Balm, according to the British chemists, is 2½ cents. Evidently this imposingly named product is practically a lanolin ointment containing oil of wintergreen and menthol. Similar products are catalogued by various pharmaceutical houses under various names and with varying degrees of frankness concerning their composition. Two firms give the medical profession full details regarding the composition of their products. The H. K. Mulford Company who sell it under the name "Methyl Salicylate Ointment," and the Pitman-Myers Co. who name their product 'Anodyne Balm, P. M. Co." Some other firms are not so frank. Parke, Davis & Co., for instance, sell "a combination of methyl salicylate and menthol with a lanolin base" under the name 'Analgesic Balm," but do not give the quantities of the ingredients. Frederick Stearns & Co. sell "Analgesic Cream, Stearns" without giving the quantities. Nelson Baker & Co. sell "Anti-Neuralgic Ointment," and no quantities are given.

THE EVOLUTION OF A PROPRIETARY—LYSOL

Regarding certain proprietary preparations and their equivalents found in pharmacopeias or other standard works of reference, it is often questioned whether the proprietary is the original and the official preparation, the imitation or vice versa. As a general proposition, medicinal compounds and preparations are not born but evolved, as in the case of epinephrin, in which the credit of discovery belongs to no one person, but to several.[1] So it is often the case that the proprietary and official preparations may be based one on the other, while both are usually based on some preparation which antedates them. This is well illustrated by the proprietary preparation Lysol, the practical equivalent of which—liquor cresolis compositus—is official in the United States Pharmacopeia. After the discovery of phenol (carbolic acid) and the recognition of its germicidal value, it was gradually learned that other phenolic compounds occurring in the crude distillates from tar and wood were more efficient and less poisonous than phenol (carbolic acid). When this was discovered, attempts of course were made to utilize these higher and more efficient phenols, which meant that their insolubility in water had to be overcome. In these attempts there were efforts to form new compounds as well as a search for simple solvents. While the first failed, because these compounds were less efficient than the phenol from which they were made, a simple solvent was found in soap. The first attempt to utilize the solvent power of soap gave creolin, a mixture of the so-called crude carbolic acid (really containing but little phenol and consisting largely of higher phenols along with inert hydrocarbons) with soap This was followed in 1884 by Schenkel's discovery that a portion of this "crude carbolic acid" could be made soluble in water by treatment with soap Schenkel was refused a patent on the ground that any soap manufacturer should be permitted to add phenol to his soap, but in 1889 a patent for a cresol soap solution was granted to Damann, who used cresol, a constituent of "crude carbolic acid" The preparation was put on the market and has since been widely advertised under the proprietary name "Lysol"[2] It is thus seen that Lysol is a good example of the way in which manufacturers appropriate the discoveries of others, develop them and turn them to proprietary use

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[1] The Journal A. M. A., March 25, 1911, pp. 901-910.

The ill deserved patent protection for Lysol happily expired long ago and the product can now be made by any one In view of the non descriptive character of the name "Lysol" and the danger in using such names in connection with potent and poisonous remedies, this cresol soap solution has been admitted to pharmacopeias not under the original name "Lysol" but under descriptive names such as that in the United States Pharmacopeia—"liquor cresolis compositus"

JIREH DIABETIC FOOD

"Can you give me any information as to the reliability of the claims of the Jireh Diabetic Food Company? The company claims to have treated the starch in the food in some way so that it can be taken by diabetics without increasing urinary sugar, and as the products made by the company are quite palatable they are preferred to the ordinary gluten flour"

This inquiry was received from Dr E. P Evans, South Milwaukee, Wis The Jireh Diabetic Flour is one of those vicious and fraudulent products—of which there are many on the American market—that contain practically as much starch as ordinary flour but are sold under misleading names as safe products for diabetics The law that made lying illegal has produced many changes in the Jireh advertising To tabulate

BEFORE	AFTER
Jireh Diabetic Flour	'Jireh Flour
Jireh Diabetic Foods	Jireh Diatetic Foods
Jireh Starch *Changed* Foods	Jireh Starch *Treated* Foods
No chemicals are used in the *change* of the starch	No chemicals are used in the *treatment* of the starch

It is worth noticing that the Jireh concern has coined a word— diatetic"—and uses it throughout its advertising matter This word is used wherever the word "diabetic" formerly occurred in the Jireh circulars It is doubtless in line with the general attempt to deceive the public without actually violating the letter of the law The booklets sent out by the Jireh Company still contain a vast amount of pseudoscientific non sense although not so much now as they did a few years ago The claim made by the concern that the starch in their flour and foods is so changed as to be harmless for the diabetic is a cruel falsehood To quote from a report by Dr A. L Winton, Chief of the Chicago Laboratory of the Bureau of Chemistry, United States Department of Agriculture

> The Jireh Diabetic Food Company designate their foods as starch changed but our analyses and microscopic examinations do not indicate that the change if any is of a kind that renders the materials less objectionable for diabetic use

As a matter of fact Jireh flour contains practically as much starch as ordinary wheat flour To be exact Jireh flour contains 73 02 per cent carbohydrates while ordinary wheat flour contains about 75 per cent Ordinary flour sells at the rate of about $3 a hundred pounds Jireh flour sells for $11 a hundred pounds These products were discussed in The Journal, Sept 12 1908 p 932 and Nov 21 1908 p 1799

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[2] Pharm Ztg Oct 14 1908 p 817

Hygiene and Sanitation in the Industries—The problems of sanitation and hygiene in industry are as individual and as difficult as are the questions of sanitation and hygiene in schools or in municipalities, and the study of them is essential to the health of an industrial nation—W Talbot in *Am Jour Public Health*

Correspondence

Cesarean Section from the Point of View of a Patient

To the Editor—Early last fall when it became positive that I was pregnant and not suffering from the menopause or a pseudocyesis I had to consider seriously the outcome to myself and to the child

The thought of a long tedious labor with extensive perineal repair and, if forceps became necessary, the probable death of the much wanted little one was not pleasant to contemplate and led me early to look up carefully the subject of cesarean section, which I selected for the following reasons age 41, first pregnancy, measurements small, the probability in an elderly primipara of the baby being a boy with a large head like his father, the better chance for a living baby, the elimination of perineal tears with the resulting invalidism, and finally the small mortality to both mother and child when the operation is undertaken just before labor begins

Having settled the matter of cesarean section definitely in my own mind I found a surgeon who coincided with my views, especially when the later examinations showed a malposition of the child This decision made for peace of mind, as much as did the continuing of my active work during the entire time of carrying the baby

On the morning of June 13, 1912, having had mild uterine contractions most of the previous night, I went to the hospital after a breakfast of shredded wheat, milk and soft boiled egg reaching there about 10 a m I was immediately prepared in the usual way for a major operation, going within the hour to the operating room, thus avoiding the long dreary wait through which a patient usually passes when entering the hospital the night before At my own request I was allowed to have the anesthetic on the operating table rather than in the anesthetic room, so as to lessen the possibilities of asphyxiating the baby I counted only five breaths before I lost consciousness and knew nothing more until I reacted in my room at 2 30 p m My chart says that I had severe uterine contractions, which are vouched for also by my husband, but my only remembrance of this time was an inordinate thirst and my insistence on having a continuous supply of cracked ice, which was granted, and the three hypodermics of morphin and atropin, which were given me during the first night. Several days later desiring to cough I suddenly discovered the soreness of my abdomen and the presence of the incision I had no nausea whatever until given an enema the night of the second day and again on the fourth day following a dose of Rochelle salts I did suffer intensely from gas in the intestine but this was relieved, as a rule, by the passage of a rectal tube At the end of the first week I was annoyed by drenching perspiration at night In ten days the stitches, in three continuous sutures, were removed At the end of two weeks I was out of bed, in eighteen days I was home and I went down stairs on the twenty third day At no time did the temperature go above 100 F and to that only on two days during the first week With plenty of ice and orange albumin water I fared nicely until soft diet was allowed on the third day, which was followed shortly by regular diet

The child instead of being a large headed boy was a moderately small girl weighing 6¼ pounds, and is at present doing well My friends remarked on the nice appearance of the baby which no doubt was due to the lack of compression The presence in the uterus of a number of fibroids probably caused the malposition of the child

In closing I wish to express my appreciation of Dr M Louise Strobel and Dr Albert Stavely for my exceptionally good condition at present and for permission to present this case

Martha M. Brewer Lyon, M D, Washington, D C

State Supervision of the Feeble Minded

To the Editor—I believe that you have well summed up the situation in the last sentence in your editorial on "The Elimination of Feeble Minded Strains" (Nov 16, 1912, p

801) "Considered in all its various aspects it would appear that the most practical plan for the elimination of the feeble minded strains should judiciously combine the methods of segregation and sterilization.'

That there may be, however, such "judicious combination of segregation and sterilization" there must first be a census of all the feeble minded in the state The state committee on lunacy of each state should know exactly the names and location of all feeble minded persons in the state, and should be charged with authority to compel any feeble minded person to enter an institution whenever it deems that such action is for the public welfare, it should likewise have authority to detain a feeble minded person in such an institution In short, the state should have supervision over all the feeble minded within its borders whether in institutions or living outside, and should decide which may live outside institutions and which must live inside institutions At present this tremendously important question is largely decided by the parents and guardians of the feeble minded—the very persons who are least fitted to give judgment on these questions They naturally consider not the welfare of the state but that of the individual

I believe such state supervision for the feeble minded is most fundamental. When this has been established I would say with you, that "the most practical plan for the elimination of the feeble minded strains should judiciously combine the methods of segregation and sterilization" But first of all the state must assume full authority over all feeble minded within its borders

Theodore Diller, M.D, Pittsburgh

Queries and Minor Notes

Anonymous Communications will not be noticed Every letter must contain the writer s name and address but these will be omitted, on request

BRUSSELS CONFERENCE AND TREATY ON UNIFORMITY OF POTENT DRUGS IN THE PHARMACOPEIAS

To the Editor —In the review of the 'Digest of Comments on the Pharmacopeia of the United States of America Oct. 12 1912 p 1300 there appears reference to the treaty signed at Brussels and to a conference protocol Please explain what is meant by the Brussels conference and the protocol and treaty

Physician and Pharmacist

Answer.—In response to an invitation sent out by the Belgian government, at the request of the International Pharmaceutical Congress in Paris in 1900, delegates appointed by their respective governments met in Brussels in September, 1902 to consider the practicability of eliminating differences in the strength of certain potent medicaments bearing the same name in different pharmacopeias The conference agreed on a protocol in the form of three articles The first article included suggestions for uniform requirements for three chemical substances, nine drugs and thirty pharmaceutical preparations The second article proposed three general principles to be observed in compiling the several national pharmacopeias The third article suggested the expediency of adopting a normal drop counter for measuring out drop doses of potent liquid medicines The protocol was signed by the delegates at the conference, and, after submission to the home governments, by their diplomatic representatives

The treaty referred to was signed at Brussels, Nov 29, 1906, by the diplomatic representatives of the following governments Great Britain, Germany, Austria and Hungary, Belgium Bulgaria, Denmark, Spain, France, Greece, Italy, the Grand Duchy of Luxemburg, Norway, the Netherlands, Portugal, Russia, Servia, Sweden, Switzerland and the United States It is an agreement between the United States and the other governments respecting the unification of the formulas for potent drugs on the basis indicated in the protocol agreed on at the conference held in Brussels in September, 1902 This treaty represents the first practical step in an agitation continued for more than half a century, to bring about uniformity in the composition and strength of widely used medicaments The efforts made previous to 1900 were directed to the development of an international pharmacopeia and were futile because they were too comprehensive As an illustration of the practical results so far achieved it may be pointed out that, with the single exception of Great Britain, all the powers subscribing to the protocol of the Brussels Conference have now issued revised pharmacopeias and the total number of compliances with the requirements of Article 1 of the protocol has been increased from 129 in 1902 to 260 in 1910, while the points of non compliance have been reduced from 131 in 1902 to fifteen in 1910, the present United States Pharmacopeia being responsible for no less than five of the latter

Two important instances of the effects of this conference and treaty in securing uniformity in pharmacopeial preparations are the following dilute hydrocyanic acid, which before the conference varied in strength in the different pharmacopeias from 1 to 10 per cent of the acid (HCN) is now required to contain 2 per cent syrup of ferrous iodid, which formerly varied from 0.5 to 12 2 per cent of the salt (FeI_2), is now required to contain 5 per cent

DIAGNOSIS IN SUDDEN DEATH OF A CHILD

To the Editor —A female child, aged 19 months was suddenly taken ill at 7 in the morning and died in three hours She had been well and in good health before and was not noticeably ill during the night When called I found the child pale and limp with an apparent paralysis of throat muscles as she could with difficulty make a sound—saying once or twice mam There was considerable mucus blocking the upper air passages. Respiration was irregular and slow but not jerky temperature by axilla 98 There was no contraction of any muscles but relaxation was present Pupils were wide The child had not vomited or coughed There was no cyanosis Pulse was irregular and about 90 varying greatly, becoming much slower as the condition grew worse The child died in thirty minutes after my arrival Paralysis of respiration first appeared I maintained the respiration artificially for several minutes during which the pupils contracted and the child made a feeble effort at respiration The pupils soon dilated again and the heart ceased beating

I could obtain no history as to possible poisoning from without. The child at its supper had eaten a small amount of fresh sausage This was from their own hogs which they had just butchered under favorable conditions of weather (There was no diarrhea or distention) Father and mother and three other living children were healthy Family history was negative except that a year or two ago they lost a 4 year-old girl who they inform me, died after three or four hours illness and with precisely the same symptoms Can you diagnose the case or suggest a possible diagnosis?

George W Shriver M D Metz W Va

Answer —Without a necropsy it would be impossible to form a definite opinion with reference to the cause of death in this case Three principal causes should be considered botulism, infantile paralysis and lymphatism

1 Botulism is suggested by the history of eating sausage The symptoms of botulism are similar to those described, although usually not so acute As the sausage is stated to have been fresh, the probability of sausage poisoning is diminished but cannot be entirely excluded

2 Infantile paralysis sometimes produces death very rapidly, with paralysis of the throat muscles and of the respiration The absence of all indications of infection makes this cause very doubtful.

3 Lymphatism is a term given to a condition in which the thymus gland is much enlarged and the individual possesses only slight resistance to causes of death, so that sudden death may occur after slight causes, such as slight operation and mild infection, or even when no cause can be assigned. The symptoms in such cases are various and this condition may have been operative in the case described

A CASE FOR DIAGNOSIS PROBABLY SMALL-POX

To the Editor —Please diagnose the following case A boy aged 2 was taken suddenly ill with a temperature of 104 to 104 5 pulse 120 to 140 and respiration 35 to 40 He was delirious showed cerebral symptoms and rolled his head from side to side The temperature remained high and the pulse was frequent till the fourth day when an eruption similar to that of small pox or chicken pox appeared on the face and wrists but on no other part of the body Temperature fell but rose again in a few days and ranged from 99 to 101 5 The nose bled a little and seemed to be stopped up with something as from a bad cold On about the tenth day the nose discharged sanious pus There was never any membrane in the throat nor any history of exposure either to diphtheria or to small pox The mother who nursed the child was vaccinated early in the child s illness and on the twenty first day of the child s illness developed diphtheria

Could patient have had both small pox and diphtheria? If only diphtheria account for the eruption, which was identical with small pox except that it was scanty

W E Whiteside, M D Flatwoods W Va

Answer —From the history given by our correspondent we should think it probable that the case was one of small pox with a limited eruption The discharge from the nose was in all probability due to small pox vesicles on the mucous mem brane inasmuch as most small pox patients suffer from this symptom It is, of course, possible that small pox might be complicated by diphtheria, but we think that no such case is on record Only a bacteriologic examination could determine this point While the diagnosis of diphtheria in the mother's case may be correct, it is to be remembered that a membrane does not justify the diagnosis of diphtheria unless a microscopic examination has been made Membranes in the throat may be produced by a number of organisms, including the *streptococcus*, *pneumococcus*, the *organisms of Vincent's* angina and others A diagnosis of diphtheria should be based, whenever possible, on a bacteriologic examination of the secretions from the case

DIFFERENCE BETWEEN SALVARSAN AND NEOSALVARSAN

To the Editor —Why is neosalvarsan recommended not to be given subcutaneously though it can be given intramuscularly? What are the clinical differences between salvarsan and neosalvarsan given subcutaneously? Are their physiologic actions the same?

Joseph A Thomas, M D, Valdosta Ga

Answer —The manufacturers of neosalvarsan warn against the subcutaneous use of the remedy on account of the danger of producing infiltrations Aside from this, there seems to be no difference between the pharmacologic action of salvarsan and neosalvarsan Neosalvarsan is much less irritating to tissue than salvarsan The recommendation not to use it subcutaneously is due to the fact that any irritant drug is much more likely to cause sloughing when introduced subcutaneously than when put into the muscle Absorption is also quicker from the muscle

NOSTRUMS AND NEPHRITIS

To the Editor —I have under my care a patient with chronic parenchymatous nephritis Microscopic examination shows occasional epithelial casts with hyaline and granular casts The patient feels well and appears to enjoy the best of health Please give me your opinion on the use in such a case of the lymph injections put out by the Animal Therapy Company of Chicago, from whom I have just received a supply of literature

S T D

Answer —The *Council on Pharmacy and Chemistry took* up for consideration the "Lymph Compound R H," and "Orchitic Fluid Tablets," sold by the Animal Therapy Company and refused them recognition

The treatment of a case of chronic parenchymatous nephritis is a task requiring the best judgment and the greatest knowledge that the physician can command From the first his aim should be to do no harm, and with this in view he will recognize that since we do not know the cause of this disease, and since we are unable to influence the essential process in the kidney, the administration of a remedy capable of doing harm should be undertaken only under the clearest indications It is probable that the remedy proposed, containing, it is asserted, a mixture of foreign proteins might injure healthy kidneys, to say nothing of sick ones It is well known that foreign proteins such as the white of egg, if they enter the circulation unchanged, are excreted by the kidney and are liable to produce serious irritation, which in the case of parenchymatous nephritis might easily aggravate the existing condition and frustrate all other efforts at a cure More especially is it *imperative to do no harm* when, as in the case reported by our correspondent the patient appears to be in good health Two questions should be raised in that case First, is there any evidence that the occasional excretion of a few casts, whatever may be their variety is actually doing the patient any harm? And second, since there are no symptoms what possible improvement could be expected from treatment? It is admitted that we have no remedy which can effect an essential change in the condition of the diseased kidney What must be done in such a case is to spare the kidney—to require of it the minimum of functional activity In such a case the physician who introduces an animal protein, foreign to the human system, would be taking a serious responsibility The chances are that it would do harm how great, no one can tell If the physician can really make up his mind to experiment at the risk of the life of his patient this case appears to be one unusually favorable to the manufacturer of the serum. There are chances that the diagnosis may be incorrect and that such a condition of the urine does not indicate a serious condition of the kidney It is frequently the case after an acute infection, or some similar irritation, that the kidney continues for some time to excrete albumin and casts but the condition eventually clears up In such a case if the serum did no harm it would be given the credit of curing the patient who recovers in spite of it It is a little unfortunate, however, for the purpose of such demonstration that the patient is said to feel well If only he could be persuaded that he has a serious disease so that he might be somewhat depressed mentally, the effect of the cure would be more remarkable!

If the physician to whom such a patient comes for advice, instead of taking the wise course of seeking reliable information, were to take at their face value the statements of interested commercial manufacturers—if he were to administer this unknown and dangerous remedy, the effects of which he cannot *predict*—he *would commit a breach of trust* more culpable than the most vicious attempts of the nostrum maker to mislead the physician and the public

LITERATURE ON MALARIA

To the Editor —We are doing the postgraduate course and are beginning on the third month of the second year—diseases due to animal parasites Can you furnish me with or refer me to a library where I can get the most recent articles on malaria?

A R. Carter M D Murphysboro Ill

Answer —

Harrison W B Prevention and Treatment of Malaria in the Negro Race Under Delta Conditions *Mississippi Med Month*, October 1912 abstr in The Journal, Oct 26 1912 p 1573

Brockway D S Treatment of Hemorrhagic Malarial Fever Without Use of Quinin *South Med Jour*, September 1912 abstr in The Journal Oct. 5 1912 p 1320

Jackson T W Malarial Hot Bed Within Sight of National Capitol *South Med Jour* September 1912 abstr in The Journal, July 27 1912 p 1209

Holland E D Malaria as It Concerns the General Practitioner *South Med Jour*, September 1912

Hand A Fever Malaria Quinin *South Med Jour* September 1912

Malaria and the Development of the South editorial The Journal, Sept 14 1912 p 885

Bass C C Successful Cultivation of Malarial Plasmodia The Journal, Sept 21 1912 p 936

Cultivation of Malarial Plasmodia, editorial The Journal Oct 12 1912 p 1331

White, J H Eradication of Malaria *South Med Jour*, August, 1912 abstr in The Journal, July 27 1912 p 297

Henson G E Possible Etiologic Factors in Malarial Recurrences Significance of Such Cases and Their Treatment, *South Med Jour* August 1912 abstr in The Journal, July 27 1912 p 299

Booth B H Pernicious Malaria with Cerebral Symptoms, Resembling Heat Stroke with Report of Cases *South Med Jour* August 1912

Thomson D Variations in Numbers of Leukocytes and Crescents in Malaria Destruction of Crescents Conclusions Regarding Prevention of Malaria by Administration of Quinin *Ann Trop Med and Parasitol*, July 1912 abstr in The Journal, Sept. 14 1912 pp 904 905

Prampolini B Malaria in Relation to Operations and Trauma *Policlinico*, July 7 1912, abstr in The Journal, Aug 24 1912 p 684

Brown W H Malarial Pigment (Hematin) as Factor in Production of Malarial Paroxysm *Jour Exper Med*, June 1912 abstr in The Journal, July 20 1912 p 226

Rowley Lawson M Cause of Malarial Anemia and the Intravascular Migrations of the Malarial Parasite *Arch Int Med* April 1912 p 420 abstr in The Journal May 4 1912 p 1398

Craig C F Is Hemoglobinuric Fever a Manifestation of Malaria or a Disease Sui Generis? *Arch Int Med* January, 1911 p 56 abstr in The Journal Feb 25 1911 p 621

Brem W V Studies of Malaria in Panama I Clinical Studies of Malaria in the White Race *Arch Int Med* December 1910 p 646 abstr in The Journal, Jan 14 1911 p 155 II Treatment of Blackwater Fever *Arch Int Med* February 1911 p 153 abstr in The Journal Feb 18 1911 p 925 III Etiology of the Erythrolytic Hemoglobinuric Type of Blackwater Fever *Arch Int Med* February 1912 p 129 abstr in The Journal, March 16 1912 p 731 IV Relation of Malaria to Other Diseases with Especial Reference to Dysentery *Arch Int Med* June, 1912 p 698

LITERATURE ON SPRUE

To the Editor —Please refer me to the most important literature on the subject of sprue

Charles E Stewart M D Battle Creek Mich

Answer —The following may be referred to

Macdonald W C C Sprue and Ankylostomiasis Treatment *Australasian Med Gaz* July 20 1911 abstr in The Journal, Sept 16 1911 p 1013

Burnet, J Are Pellagra and Sprue One and the Same Disease? *Med Press and Circular* Aug 10 1911 abstr in The Journal, Sept. 16 1911 p 1014

The Investigation of Sprue The Journal Nov 25 1911 p 1775 (London Letter)

Abel F Sprue Plus Syphilis, *Deutsch med Wchnschr*, Feb 29 1912 No 9

Low G C Blood in Sprue *Jour Trop Med* May 1, xv No 9

Ashburn P M Some Inquiries Regarding Sprue *Bull Manila Med Soc* March iv No 3

Pratt J H and Spooner L H A Study of Sprue The Journal, July 20 1912 p 218

Begg Charles Sprue—Its Diagnosis and Treatment. W Wood & Co., New York Price, $2.

ANTIFREEZING MIXTURES FOR AUTOMOBILES

To the Editor —What chemicals or mixtures are best suited for preventing freezing in the water reservoir of an acetylene generator and in what proportion should it be added to the water to prevent freezing at 0 C (32 F) or —5 C (23 F)? Are alcohol and glycerin permissible? What is safe and non interferent with the action of water on calcium carbid? An answer to the above will also be of service to those who desire to prevent the freezing of the radiators of standing automobiles

Edmund P Fowler New York

Answer —As our correspondent says, information on this subject is not plentiful In the following answer we quote rather freely from an answer to a similar query contained in the *Bulletin of Pharmacy* and from Meyer Brothers' *Druggist*, both of November, 1911 What follows refers more particularly to the prevention of freezing in automobile radiators, fire extinguishers, etc In the selection of a non freezing solution for an automobile the action of the solution on the circulating system and also the capacity of the solution to withstand high and low temperatures are the points to be considered Among the solutions used for this purpose are sodium chlorid and calcium chlorid solutions glycerin, wood alcohol and denatured alcohol When salt solutions such as calcium chlorid, sodium chlorid, etc., are used, two corrosive actions, chemical and electrolytic, take place Calcium chlorid is apt to contain hydrochlorid acid which if not neutralized will attack metals, and directions are usually given when this is used to neutralize by the addition of an alkali Caustic solutions, however, are just as destructive as acid solutions, forming hydrates on the different metals composing the circulating system This chemical action, though serious, is probably second to the electrolysis which occurs universally when salt solutions are employed, and causes a rapid eating away of the metals Sodium and calcium chlorid solutions in the strength of 0 5 pound per gallon freeze at 24 and 29 F, respectively, and in the strength of 3 5 per gallon freeze at —8 F

Glycerin makes a pretty good antifreezing mixture as it boils at an extremely high temperature and its freezing point can be reached only by artificial means In addition to its cost however, which is considerable, it has some objections Unless chemically pure, it is apt to contain fatty acid, and it produces destructive chemical action It also destroys rubber connections and after a short time becomes foul and requires frequent renewal Glycerin has been recommended for use in fire extinguishers, an addition of 3½ quarts to a standard extinguisher making a solution capable of withstanding —4 F, and 4 quarts a temperature of —10 F This use would be similar to that in the acetylene generator and though a mixture of glycerin and water would probably not prevent the generation of gas, a considerable quantity of glycerin mixed with the water might retard it We have no evidence on this point

Wood alcohol and denatured alcohol are good agents for this purpose Wood alcohol has been stated to have a slight tendency to produce formic acid which would in time corrode the metal parts It also boils at a lower temperature than denatured alcohol and less of the latter is required, as the tendency to evaporate is less Denatured alcohol is also much cheaper Denatured alcohol has no corrosive action on any of the metals, and its ability to withstand cold is indicated by the fact that it freezes at about —160 F It is manufactured by fixed formulas prescribed by the government and is therefore practically uniform It contains no solid matter and does not require filtration The freezing points of various mixtures of denatured alcohol with water are about as follows

20 per cent solution	10 F
30 per cent solution	—5 F
40 per cent solution	—20 F
50 per cent freezes at about	—35 F

A mixture of denatured alcohol and water of sufficient strength to prevent freezing at anything but extraordinarily low temperatures probably will not very materially retard the action of the water in generating acetylene gas from the carbid

It will appear from the above that denatured alcohol is probably the most satisfactory and cheapest medium for preventing freezing in automobile radiators, fire extinguishers and gas generators

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EDITORSHIP OF SANGAMON COUNTY BULLETIN

To the Editor —Thank you for your item Sangamon County Bulletin (The Journal Nov 16 1912 p 1804) in which you speak of the editorial on appropriations for hog cholera but none for cholera infantum You give me credit for editorship of the *Bulletin* While I wrote the editorial mentioned, the editor of the *Bulletin* is Dr H C Blankmeyer of Springfield secretary of the Sangamon County Medical Society

H D Griffiths M D Springfield, Ill

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery January 14 Chairman Dr W H Sanders

Colorado State House Denver January 7 Sec Dr David A Strickler 612 Empire Building

Illinois Coliseum Annex Chicago January 22 24 Sec Dr James A Egan Springfield

Indiana Room 57 State House Indianapolis January 14 16 Sec Dr W T Gott State House

Minnesota Pathological Institute University of Minnesota Minneapolis January 7 Sec Dr Thomas S McDavitt Lowry Building St Paul

New Hampshire Concord December 17 18 Regent Mr H C Morrison State Library

New Mexico Santa Fé January 13 Sec. Dr W E Kaser, East Las Vegas

New York January 28 31 Chief of Examinations Division Mr Harlan H Horner Department of Education Albany

North Dakota Grand Forks January 7 Sec., Dr G M Williamson

Oklahoma Oklahoma City January 14 Sec., Dr John W Duke Guthrie

Oregon Portland January 7 Sec. Dr E B McDaniel 702 Electric Building

Rhode Island State House Providence January 2 Sec Dr Gardner T Swarts State House

South Dakota Watertown January 8 Sec Dr L G Hill

Utah Salt Lake City, January 6 7 Sec Dr G F Harding 310 Templeton Building

Vermont Montpelier January 14-16 Sec. Dr W Scott Nay Underhill

Virginia Richmond December 17 20 Sec Dr Herbert Old Norfolk

Washington Spokane January 7 12 Sec Dr F P Witter Traders Block

Wisconsin Milwaukee January 7 9 Sec. Dr John M Beffel 3200 Clybourn Street

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Reorganization of the Medical Department of the University of California

At a meeting of the regents of the University of California in December, 1911, the committee on Medical Instruction recommended that the departments of the medical school in Berkeley and San Francisco be brought together in San Francisco as soon as possible, that the clinical years be put on an academic basis and that a proper teaching hospital and proper laboratories be provided It was declared to be the regents' desire to establish a medical school of the highest standard

Official information is received that at a meeting in April 1912, on the recommendation of the medical faculty, the following plan of reorganization was adopted

Clinical instruction in the medical school is to be carried on in three main departments

1 Gynecology and Obstetrics It was decided to put this department on an academic basis at once and to allot full academic salaries for a professor and an assistant

2 Medicine This department to include pediatrics, neurology and dermatology This department cannot as yet be placed on a full academic basis, but the payment of assistants for the current year has been provided for

3 Surgery This department to include orthopedics, urology, ophthalmology, rhinology, otology and laryngology As with medicine, there were not sufficient funds available this year to put the department on a full academic basis, but three paid assistants have been provided for

In addition to the main departments, the work of the hospital pathologist was reorganized and an additional assistant professor of pathology was secured

In accordance with the plans adopted by the regents, a *movement is on foot to provide a new university hospital* The present plans aim at four units of forty or fifty beds each to be devoted respectively to surgery, medicine, diseases of women and diseases of children Money has already been given ($350 000) by private persons to build and equip the departments of medicine and children s diseases In order to carry on the work in the present buildings the regents have granted $20,000 for alterations in the hospital for accommodation of clinics and for equipment of clinical and pathologic laboratories. A children's ward has been added in the hospital

New Hospital Dedicated

The new teaching hospital of Meharry Medical College, the George W. Hubbard Hospital, was dedicated Nov. 29, 1912. Addresses were given by a number of prominent men who are interested in the advancement of negro education. The total cost of the building was about $40,000. It is a brick structure three stories in height including the basement and comfortably provides accommodations for seventy five patients, or 100 patients in case of emergency. It was named in honor of the venerable dean of the Meharry Medical College.

Nevada November Report

Dr. S. L. Lee, secretary of the Nevada State Board of Medical Examiners, reports the written examination held at Carson City, Nov. 4-6, 1912. The number of subjects examined in was 13, total number of questions asked, 100, percentage required to pass, 75. The total number of candidates examined was 4, of whom 3 passed and 1 failed. Eight candidates were licensed through reciprocity. The following colleges were represented:

PASSED

College	Year Grad	Per Cent
Jefferson Medical College	(1910)	89.5
Laval University, Quebec	(1901)	78.3
College of Physicians of Ireland	(1885)	93.2

FAILED

College	Year Grad	Per Cent
Ohio Medical University	(1904)	63.3

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
Hahnemann Med. College and Hospital, Chicago	(1890)	Illinois
Jenner Medical College	(1903)	Illinois
Hospital College of Medicine, Louisville	(1905)	Kentucky
Medical School of Maine	(1896)	Maine
Baltimore Medical College	(1908)	Maine
Univ. of Minnesota, College of Med. and Surg.	(1911)	Minnesota
St. Louis College of Physicians and Surgeons	(1895)	Iowa
Jefferson Medical College	(1898)	Penna.

Medical Economics

This Department Embodies the Subjects of Postgraduate Work, Contract Practice, Legislation, Medical Defense, and Other Medicolegal and Economic Questions of Interest to Physicians

THE OUTLOOK ON A NATIONAL DEPARTMENT OF HEALTH

The most promising feature of the campaign for national health organization is the growing understanding of the problem on the part of influential men outside of the medical profession. THE JOURNAL has repeatedly pointed out that a national department of health would have and could have nothing to do with the individual practice of medicine, that it could have no relation to "schools" of medicine, that it could not affect the individual rights of any one, and that its functions would be almost entirely educational and simply an expansion and coordination of the work already being done by existing bureaus and divisions now scattered in different parts of the executive department. Evidently the truth of these facts is being realized by all except those who are too ignorant or too prejudiced by partisan bias to appreciate the facts, or by those who are too much influenced by selfish considerations to desire the passage of the measure for the public good. In last week's issue of the *Outlook* appears a splendid editorial on this subject. It presents such a calm, accurate and well considered discussion of the subject as to justify reprinting the greater part of it. After discussing the difference between our private and our public interest in health matters the *Outlook* says:

"There is no question of the right of the federal government to conduct such a department. It has as much right, for example, to put up barriers against disease as it has to put up barriers against goods of foreign manufacture. Moreover, it is exercising its right already through various disconnected agencies, such as the Public Health Service and the officials who are engaged in the enforcement of the pure food law. The question is not whether the federal government shall exercise the right or not, but whether it shall exercise that right intelligently and effectively by means of a single, unified, administrative body devoted solely to matters of health.

"Suppose such a department were established, what would its functions be?

"In the first place, there should be no misapprehension as to what those functions would not be. The federal Department of Health would not be concerned with the treatment of individual cases of illness. It would not have anything to do with the 'healing art.' The officers of such a department would not be engaged in making sick people well.

"Unfortunately, some of the advocates of such a department or service have done much to create a wrong impression on this point. For example, the national platform of the Progressive party, in its plank favoring the 'union of all the existing agencies of the federal government dealing with the public health into a single national health service,' adds the phrase 'without discrimination against or for any one set of therapeutic methods, school of medicine, or school of healing.' The platform might as well have opposed discrimination against or for any school of theology. With the work of such a Department of Health, so called therapeutic methods, schools of medicine, or schools of healing, have nothing whatever to do. One might as well say that in establishing the Bureau of Chemistry there should be no discrimination against or for the practice of alchemy, or in the work of the Geodetic Survey there should be no discrimination for or against astrology. The Bureau of Chemistry is concerned only in ascertaining and acting on the facts of the science of chemistry. The Geodetic Survey has only to take into account the scientific work of geographers, mathematicians, and astronomers. And so the sole basis of such a Department of Health as is proposed should be, and must necessarily be, the facts of science as ascertained by the scientific methods of the laboratory. As a matter of fact, there is no confusion regarding this. It must be remembered that there is nothing essentially new so far as the nature of the work itself is concerned. It should not be forgotten that it was the United States government which carried on the investigations that resulted in the expulsion of yellow fever from the Canal Zone. The federal government did not engage in curing people, except in so far as it employed physicians to care for those for whom it was directly responsible, as it employs physicians and surgeons in the Army and Navy. So far as the public is concerned, its work had nothing whatever to do with methods of therapeutics or schools of healing. It was a scientific work as firmly based on the facts of science as the engineering work in the construction of the canal and its locks. It was an error to introduce the question of schools of healing into the proposal for a unified public health service or department, and it should not be repeated. The one form of discrimination which such a department should practice should be against the unscientific, and for the methods of the ascertained facts of science.

"The primary function of such a Department of Health is that of acquiring and distributing information. In other words it should do for the health of the people what the Department of Agriculture is doing for the agriculture of the people. The officials in the Department of Agriculture have at no time attempted to tell farmers how they must plow their land or sow their seed. The Department of Agriculture is continually studying the question of soil, of seed, of animal life, and of agricultural methods, and is storing up and tabulating this information. And then it makes this information accessible to those to whom it will be useful, it answers the queries of farmers, it sends out its instructors. This is just what such a Department of Health would chiefly do with regard to the health of the people. At present there are no uniform vital statistics for the United States. There is no means, for example, of accurately ascertaining what the death rate in America is.

"Secondarily, its function would be regulative. Now the United States government does to some extent establish health regulations. But only to some extent. To-day the nation at large must depend for protection against the invasion of cholera through the port of New York, not on its national servants, but on officials of the state of New York. It so happens that in the past the state of New York has done some exceedingly competent work in this respect, but the people of Ohio and of Pennsylvania and of Minnesota, and of other states where immigrants go, should not have to be dependent on the efficiency of the state government in New York to be adequately protected against the disease which may at any time become a menace to the whole nation by appearing at the port of New York. It is as much the function of the fed eral government to fortify the nation against foreign disease as it is to fortify the nation against foreign armies It cannot do so adequately until a single, united body for that purpose is established as its instrument

"The question whether such a body should be a Department with a Cabinet officer at its head, or a bureau erected in one of the departments, or an independent commission having no relation to any department, like the Interstate Commerce Commission, is not an unimportant question, but it is a secondary one It would be better, however, to have a bureau or an independent commission rather than not to have a unified body at all The prime duty of Congress in the protection of the health of the American people is to unite the various disconnected, and sometimes conflicting, agencies of the government into a single body and to give it power first to acquire the necessary information, second, to make that information accessible to the public, and, third, to enforce generally and effectively such regulations as are now enforced by the federal government sporadically "

A PLEA FOR A SQUARE DEAL FOR THE PATIENT

Practitioners, says R R White (*Texas State Journal of Medicine*, November, 1912), should not become so interested in each other as to deprive the patient of his square deal

"The daily press and popular monthly magazines are beginning the discussion of this fee splitting business The people have been kept in ignorance of the plan, or it could never have reached its present magnitude Organized medicine has been negligent Had the people been fully advised at the beginning of the practice they would themselves, as a matter of self protection, have stopped it They would have said to the family physician, 'I want to pay you for your services I want to pay you for your examination and for your advice If you have advised operation I want to pay you for that If you have advised me to take one of my loved ones to a hospital for operation, and in your conscientious judgment as my physician as the guardian of the health of my wife and children, as my friend and confidential adviser, you can add safety to my dear one by going with me to consult with the specialists we are going to employ to operate, then by all means go, give the specialist the benefit of your acquaintance with the family the benefit of your observation and treatment of the case and render me your bill for the service But, remember, doctor, you are working for me, you are the custodian of the health of my family, the question of life or death may depend on whether or not you have made a wise selection of the operator Do not allow yourself to be influenced by personal friendship for some particular specialist, do not allow yourself to be influenced by some personal grudge, and, by all manner of means, do not take my sick to one who will pay you a fee for the favor If the specialist is willing to pay you a fee for bringing him the patient, there is the beginning of a collusion between you, where, for financial reasons you will protect the specialist and he will protect you, and the Lord, unaided by that greatest boon to suffering humanity—a loyal, conscientious family physician—will have to care for my child alone Doctor, don't put yourself in a position to be unwisely unwittingly or selfishly influenced You are in my employ, I will compensate you as best I can, and I want to know that I have received that to which I am entitled—your whole soul, honest conscientious advice and, irrespective of results, I will know that my friend, my adviser, my doctor, has given the patient a square deal'"

White believes that whenever the people understand the question thoroughly it "will not be necessary for us to discuss it in medical meetings, for they will themselves condemn the practice of fee splitting and stop it As a matter of common sense, the people will know that their family physician cannot give them an unbiased opinion when he is being secretly paid for his advice by another, who is to profit thereby, and when they realize that such is the case, they will lose confidence in him and will employ a new family physician."

When the family physician takes his case to the specialist, White would have him say, "'Here is my patient here is the history, here is the result of my treatment, my observations and conclusions. Make your examination and give me your advice as to operation or treatment I have advised the family that my visit and consultation would be $25 (or maybe $100), that they should provide for that before paying you your fee, that my services were rendered first, and by priority should be paid first, that if they have not enough to pay us both they should give you a note for the balance due you'

"Would this be fair to the specialist? To be sure it would, and all whole souled men would approve it and, best of all, it would be fair to the patient, for it would insure him that to which he is entitled—a conscientious, frank, business like handling of his case Those specialists who are paying commissions for their cases have manufactured a smooth, plausible story to repeat to the general practitioner, and the burden of the song is square deal and 'live and let live,' but the square deal does not apply to the patient and the live and let live is not meant for him it is all for the doctor If it means anything in particular to the patient, it may mean that he has been bartered as a piece of merchandise"

The substance of the whole question is that the secret division of fees like secret rebates and commissions in the business world, is dishonest If it was not, there would be no reason for keeping it secret The general practitioner will be more sure of a square deal" if he insists on all transactions between the patient, the consultant and himself being known to all

Book Notices

Grundzuge der pathologisch histologischen Technik Von Dr Arthur Müllberger M R C S (England) L R C P (London) Paper Price 2 marks Pp 86 Berlin Julius Springer 1912

The object of this little pamphlet is to select laboratory methods that have been found most useful in practical work and disentangle them from the mass of procedure described in the large works on technic As a result we have in the space of a few pages clear directions for performing the usual tasks of pathologic histology that are required in ordinary clinical laboratories The choice of methods is for the most part good and the directions are plain and easily followed As the author recommends formaldehyd solution for almost everything, it would seem a wise precaution to warn his readers that constant use of this fixative often leads to serious dermatitis

Elementary Bacteriology and Protozoology The Microbiologic Causes of the Infectious Diseases By Herbert Fox M D., Director of the William Pepper Laboratory of Clinical Medicine in the University of Pennsylvania Cloth Price $1 75 net. Pp 237 with 72 illustrations Philadelphia Lea & Febiger 1912

In this little book the author has endeavored to answer the question as to how and under what circumstances bacteria produce disease. The book is elementary in its scope, suitable for nurses for instance, and beginners in general in the study of bacteriology There is very little discussion of any technical matters The book can be recommended as thoroughly reliable

Die Migräne Von Edward Flatau Monographien aus dem Gesamtgebiete der Neurologie und Psychiatrie. Herausgegeben von A Alzheimer und M Lewandowsky Part II Paper Price 12 marks Pp 253 Berlin Julius Springer 1912.

In this monograph the author has brought together the various disease pictures commonly called migraine and treated them under one heading He discusses the subject under (1) the vulgar or simple (2) the ophthalmic, (3) the epileptic (4) the psychic (5) the ophthalmoplegic, (6) the facioplegic varieties of migraine Though based on the literature of the world, the monograph is not mere compilation On the contrary, the author has views of his own for instance he does not hesitate to infer a relation between migraine and epilepsy Among the 500 cases of migraine which he had observed he found thirty six with epilepsy either as an equivalent or as a complication In the majority of his cases migraine occurred before the en developed and with its appearance the attacks of her became less frequent or entirely disappe states the more nearly symptoms app ore likelihood is there of epilepsy supervening His discussion of the rather unusual type of psychic migraine is full and interesting He found it present in a rudimentary form in about 26 per cent of all his cases, manifesting itself as a mild depression A patient of this type he pictures as an individual misanthropic and egocentric, who shuns society and narrows his mental horizon until he gradually becomes asocial, though still capable of performing his daily routine work In his discussion of the nature of the disease complex called migraine Flatau goes fully into the various theories advanced, but he himself leans to the view that the condition belongs to the family of metabolic disorders of which gout is a prominent member Under treatment, conformably to the latter view, he advises among other things a diet free from purins and publishes a list of articles for those affected with migraine in which meats, fish, coffee, tea and cocoa are practically excluded Of drugs he favors the lengthy administration of bromids, but omits to mention the routine prescription of a reliable preparation of cannabis indica in ascending doses, from which English and American neurologists have derived considerable success in a number of selected cases After following the author in his logical deductions with reference to etiology, pathology and diagnosis the sufferer from migraine will nevertheless seek in vain for something new to assuage his nerve racking pain The book on the whole is a meritorious one and deserves especial praise for its concise language and the absence of padding

The Nervous System An Elementary Handbook of the Anatomy and Physiology of the Nervous System For the Use of Students of Physiology and Neurology By James Dunlop Lickley M D Demonstrator of Anatomy University of Durham College of Medicine Cloth Price $1 80 net Pp 130 with 118 illustrations New York Longmans Green & Co 1912

This book owes its origin to the necessity that the student of modern psychology know the essential facts regarding the structure of the nervous system though he need not trouble himself about details As such facts are given in text books of anatomy in too great detail and it would be necessary for the student to purchase the entire work, the author has endeavored to state in plain language the principal features of nervous anatomy and physiology so that the non medical student can readily understand them The purpose has been well carried out and the treatise is interesting and profitable reading for the medical man as well as for the layman The author voices the hope that, while intended primarily for non medical readers, the book may prove acceptable to the medical student for preliminary study It might even be contended that the knowledge found in a simple text book like this is as much as the average medical man will retain and that such a work thoroughly mastered might help the physician to retain clearer ideas of the structure of the nervous system than he acquires from the laborious study of more detailed treatises

Dental State Board Questions and Answers By R Max Goepp M D Professor of Clinical Medicine at the Philadelphia Polyclinic Cloth Price $2 75 net Pp 428 Philadelphia W B Saunders Company 1912

This book is said to be based on questions collected from lists published during the last few years in the various dental journals The questions therefore, are representative of those asked by state dental boards It is asserted that questions which have been asked repeatedly and by the majority of dental examining boards have been included, followed in each instance with the answer given as briefly as was compatible with clearness The book will doubtless be of service to those who are preparing for an examination for a license to practice dentistry

The Imperial Cancer Research Fund Under the Direction of the Royal College of Physicians of London and the Royal College of Surgeons of England Fifth Scientific Report of the Investigations By Dr E F Bashford General Superintendent of Research Boards Price 5 shillings Pp 94 with Illustrations London Taylor & Francis 1912

This report is characterized by the same excellent publication and the numerous splendid illustrations of J R Ford, as the preceding reports have been, and gives substantial evidence of the vigor and fundamental sanity of the investigative work being conducted under the fund The articles here reported all deal with investigations on natural and acquired resistance of animals to experimentally induced cancer, under the following titles "The Manifestation of Active Resistance to the Growth of Implanted Cancer," B R G Russell, "A Cytologic Analysis of the Reaction in Animals Resistant to Implanted Carcinoma," C Da Fano, "The Nature of Immune Reaction to Transplanted Cancer in the Rat," W H Woglum, "Immunizing Power of the Placenta, Blood, Embryonic Skin, Mammary Gland, and Spleen of the Different Species Against Carcinoma of the Mouse," S Higuchi

Medicolegal

Statutory Privilege and Its Waiver

(Studebaker vs Faylor (Ind), 98 N E R 318)

The Appellate Court of Indiana, Division No 2, says that Section 520 of Burns' Statutes of Indiana of 1908 provides that physicians shall not be competent witnesses as to matters communicated to them as such by patients in the course of their professional business, or advice given in such cases This privilege may be waived by the patient, or those who stand in his place, or are authorized to represent him

The reason for this statute is that communications may be made in the relation of physician and patient which a due regard for the privacies and decencies of life should protect from being exposed to the public This privilege may be waived, and when the matters have been once published to the world, no reason remains to hold the privilege in force The statute was not enacted to enable persons to avoid liability or to win a suit by making it difficult to obtain evidence, but was made in order to allow them to prevent certain private affairs from becoming public property So it has been held in this and other states that, when a witness has been permitted without objection in a former trial to testify to privileged communications, the bar of privilege is waived, and the testimony cannot be excluded on that ground at a subsequent trial

In this case all the heirs of a Mrs Faylor sued appellant Studebaker to set aside a deed of conveyance of real estate made by her to the appellant, on the grounds that she was insane when the deed was made and the conveyance was obtained through fraud of the appellant On a previous trial a medical witness was permitted, without objection from any one, to testify to information gained while a professional relation existed between him and Mrs Faylor If the appellant would otherwise have had the right to object to the admission of the evidence on the second trial, such right was waived by failure to object at the former trial, thus permitting the communications to become public

Under authorities cited, the right to waive the privilege of confidential communications, after the death of Mrs Faylor, in litigation affecting her estate, was lodged in those who represented her and stood in her place It is generally conceded that heirs may waive this privilege The heirs or devisees seeking to overthrow a will may not waive it, however, as against other heirs or devisees It is unquestioned that the administrator has the power to waive the privilege in order to conserve the interests of the estate And, as before said, when once the matters ascertained in a privileged relation are published to the world without objection, no reason remains to uphold the bar of privilege

Cross Examination of Experts with Reference to Books

(Allen vs Boston Elevated Railway Co (Mass) 98 N E R 618)

The Supreme Judicial Court of Massachusetts sustains exceptions to a verdict for the plaintiff for personal injuries on account of error in the cross examination of a medical witness for the defendant because it says that the evidence thus obtained was plainly incompetent, coming, as it did, under the settled rule that neither medical books, though of recognized authority, nor the opinions of medical experts unless testified to by themselves as witnesses, can be received as evidence The court says that the cross examination was directed mainly to showing what the opinions of other medical authorities were as to the effect of the plaintiff's alleged injuries in causing the disease called "diabetes mellitus" On the defendant's first objection to a reference to a book written by Dr Davenport, the judge expressly ruled that the witness might be asked if certain authorities did not express certain views and if that did not change his opinion, although the judge said also that the jury were not to consider what was said in Dr Davenport's book The defendant did not then except, and the cross examination proceeded on the same line Finally the plaintiff's counsel asked whether the witness was familiar with any authorities which said that diabetes mellitus might come as the result of a blow, and the defendant then saved an exception (which afterward was renewed) to that line of examination The witness was asked also about books by Naunyn and Forchheimer, the questions being framed from a medical book written in German, which the counsel held in his hand The whole effect of the cross examination was to impress on the minds of the jurors the idea that certain writers were men of eminence in medicine, whose opinions were of value, and that their opinions differed from the opinion to which the witness had testified The objectionable cross examination, against the repeated objection and exception of the defendant, was continued so that, as reported, it covered more than five pages of the exceptions Similar questions were put in different forms as to different treatises, ending with general questions calling for and eliciting answers as to any text books that might agree with the claim of the plaintiff, and accompanied by the display of several medical books on the table of the counsel The effect and as may reasonably be supposed the purpose of counsel were to bring before the jury the opinions of others who were it was suggested, persons skilled in such matters, and to lessen the weight of the witness' testimony by showing that their views were different from his The court would hesitate to say that even a broad instruction to the jury to disregard wholly the evidence thus obtained would have cured the injury which had been caused to the defendant Justice required that there should be a new trial of the whole case

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Society Proceedings

COMING MEETINGS

American Association of Anatomists Cleveland Dec. 31 Jan 2
American Physiological Society Cleveland Dec. 26 28
Southern Surg and Gynec Assn Old Point Comfort, Va Dec. 17 19
Western Surgical and Gynec. Assn Cincinnati Dec 20 21

SOUTHERN MEDICAL ASSOCIATION

Sixth Annual Meeting held at Jacksonville Fla,
Nov 12 14 1912

(Concluded from page 2091)

The Surgical Importance of the Breast

DR. E DENEGRE MARTIN, New Orleans An important duty is the instruction of patients as to the care of the breasts The expectant mother or nursing woman should be taught how to care for the nipples, for infection through a fissured nipple will not only lead to abscess and sometimes to complete destruction of the gland, but also will leave scars to light up at some future time into inoperable carcinomas I have operated on more than 150 patients with cancer of the breast Three fourths of the cancers were in colored women and were already malignant when operated on I am not able to day to point out more than four colored patients who have lived over a period of six years Twelve white patients lived, the percentage being larger because they were seen earlier Every week we turn away from our clinics cases too far advanced for even temporary relief The surgeon who picks his cases will of necessity secure the best results, but the benefit should always be given to the patient, even if it means but a short prolongation of life The mortality from operations is less than 2 per cent, and in my operations, with 50 per cent of advanced cases the mortality is less than 1 per cent. These statistics are improving daily, as far as cures are concerned Still, the prevalence of cancer is on the increase, and we can and must reduce it

Extra-Uterine Pregnancy

DR J HUGH CARTER, Memphis, Tenn We should operate in all cases as soon as possible, as we never know when hemorrhage is going to take place, even if it has seemingly been stopped As to what operation should be done, I do not believe one can say until the abdomen has been opened Then the operator should do whatever he thinks best Each patient and the conditions found in the abdomen must be dealt with individually I would insist on a careful diagnosis of each case of suspected tubal pregnancy as early as possible, thereby giving the patient a much better chance for her life

Clinical Value of the Tuberculins in the Diagnosis and Treatment of Tuberculosis

DR WALLACE J DUREL, New Orleans In my personal observation of several hundred cases, it is evident that of eighty patients who were treated previous to 1909, of all those discharged as apparently well, and who were given the tuberculin test, the test proving negative, not one relapsed, yet many of the patients showed a distinct positive reaction on their discharge, and afterward relapsed, three dying since This evidence convinces me that repeated tuberculin tests will show whether treated and supposedly cured patients are free from any tuberculous focus, active or latent, regardless of its size or location, and that the negative reaction means more than a mere tox immunity in such cases

The clinical therapeutic value of the tuberculins is exemplified in the tabulated records of eighty cases of tuberculosis treated in Louisiana previous to 1909 In this report, in the first stage, 13 cases were treated, with recovery in all, and no relapse until 1912 In the second stage, 16 cases were treated, with recovery in 15, and arrest in 1 In the third stage, 30 cases were treated, 14 apparently well, and 16 arrested In 1912, 1 of the apparently well patients had relapsed, and 1 died. Of the arrested cases, 3 patients relapsed and 2 died Of the third stage 21 patients were treated, not one recovered, 9 were arrested, 10 were improved, and 2 non improved In 1912, 16 of the 21 patients have died These figures teach the practical lesson that the early-diagnosed cases of tuberculosis can be treated with far better and more lasting results than the advanced cases

Serum Treatment of Cerebrospinal Meningitis

DR. CHARLES C GREEN, Houston, Texas In Houston we had 182 cases with seventy four deaths, a death rate of 40 6 per cent, including those treated with serum and those treated without it Out of the total number of cases treated, twenty nine did not have the serum, consequently the death rate runs up rather high, twenty one deaths out of twenty nine cases giving the enormous death rate of 72 4 per cent, which, although high, is even lower than the usual death rate when the serum treatment is not used But of the 153 cases treated with serum, fifty three patients died, giving a death rate of 35.5 per cent, a reduction of 37 9 per cent in favor of the serotherapy I have taken the number of cases that had the serum within twenty four and thirty six hours after the onset, and our death rate in these was only a fraction over 20 per cent I believe that if all these cases could be treated by men who are familiar with this procedure, the death rate would be still lower

Gangrenous Tonsil

DR. U S BIRD, Tampa, Fla So rare is this disease that it is not a text book or reference book subject Five cases only could be found in medical literature, all of which were fata In addition to these I have knowledge of five cases, four in my own patients and one in the practice of a brother physician These [illegible], [illegible] mpared to the [illegible] ve [illegible]eviously reported, [illegible] first five cases [illegible] include two deaths but neither of these was due to gangrenous tonsil, which in these cases appeared to be an intercurrent condition, more or less due to the general depression that had rendered them vulnerable to such attacks In my fourth case only were operative measures indicated When a small area is involved and the general condition is good, instrumentation is indicated, but in great depression and extensive involvement, two conditions that seem to be associated, active interference may result unfortunately Only one of my cases is of interest in connection with pathology, the noma bacillus being present

Thrombophlebitis of Orbits by Ozena Bacillus, Death

Dr M Feingold, New Orleans I saw a girl, aged 15, who had an edema of the upper and lower lid, so extensive that the eye could not be opened voluntarily There was a hard infiltration through the upper lid to the depth of the orbit The temperature was about 101 F The patient denied that there had been any previous affection of the nose An operation was immediately performed, and an extensive focus of sticky, grayish, gelatinous pus was found and evacuated Necrotic bone was also discovered in the orbit The patient stood the operation well and spent a comfortable night The next day, however, pulse and temperature gradually rose and patient complained of pain in the head Probing revealed no further focus, but the edema on the right side had increased, and dilated veins were visible over the forehead and nose Atrophic retinitis was found in each side, with crusts and pus in the middle meatus under them On the following day the Killian operation was performed, and pus was found in the frontal and sphenoidal sinuses After the operation the patient gradually grew worse and died on the night of the following day The temperature had reached 106 1 F, with profuse perspiration and labored respiration The pus was found to contain a pure culture of *Bacillus mucosus capsulatus* No post mortem was obtained The interesting points in the case are the facts that a sinus affection may be latent for some length of time, and that orbital affection may be brought about by the affection of the adjoining nasal cavities

Diagnosis of Plague

Dr R L Wilson, Charleston, S C In plague work great care should be taken in handling infected animals, tissue, cultures and other material Even persons accustomed to bacteriologic laboratory work have to be reminded of danger, as several laboratory cases of infection are on record The principal things to look out for are fleas from animals, skin abrasions, soiling of fingers, using of pipets and smoking The principal points in diagnosis are (1) typical lesions, especially characteristic buboes, (2) production of the disease in animals by inoculation, (3) the unmistakable presence of the plague bacillus in smears, cultures and in inoculated animals

Symptoms and Clinical Diagnosis of Bubonic Plague

Dr J Birney Guthrie, New Orleans The appearance of the patient sick with bubonic plague is somewhat similar to that of one under the influence of alcohol The face is swollen, the eyes injected There is a general loss of coordination, with staggering gait and thick and stammering speech The speech disturbance frequently extends into convalescence, and with persistence of lymphatic enlargement and recent scars of suppurating buboes, may furnish the clew to identification of a previously unreported case The recognition of cases of bubonic plague where it is known to exist presents small difficulty to the physician It is the identification of the first cases, especially if they are of mild type which will present the severe problem in diagnosis In a suspicious case careful and continuous observation of the superficial lymph nodes should be maintained, and puncture with the needle and examination of aspirated fluid made by smears and culture methods

Finally the early identification beyond any doubt of bubonic plague depends on the microscope It is the duty of the attending physician to submit to the bacteriologic laboratory slides made from the fluid aspirated from every suspicious bubo and from sputum in every case of pneumonia showing more than ordinary depression at the outset, with a bright red sputum instead of the typical rusty sputum of ordinary pneumonia The services of the public bacteriologist should be available 'Possibly it might be wise to require the specimen to be submitted The only hope of limiting an outbreak is that of a prompt diagnosis of the disease To day every seaport of the world is menaced by plague, and the menace will be still further increased by the opening of the Panama Canal Therefore it becomes the duty of every one of us who practices medicine in a seaport to keep constantly in mind the possibility of encountering the disease To this end examination of the superficial lymph nodes during the progress of every acute febrile case becomes a matter of necessary routine

Treatment of Plague

Dr Isaac Ivan Lemann, New Orleans Our chief and first attention must be given to prophylaxis Several methods of producing active immunity have been proposed Haffkine, working in India in 1907, proposed his well known prophylactic. This consists of a bouillon culture of the pest bacilli, killed by heat and phenolized so as to represent a 0.5 per cent solution of phenol The dose of this varies from 0 5 to 1 c c, and in special cases as much as 20 c c are given The reaction varies greatly in different individuals, as a rule, there is slight fever, malaise, with local swelling, and edema for twenty four or forty eight hours Ten days later, a larger dose may be given, the size varying according to the reaction following the first dose The protection afforded by the prophylactic is not absolute When repeated several times it affords a relative immunity for some months From 4 to 20 per cent. of the inoculated contract the disease and from 2 to 8 per cent die. Passive immunization by means of serums derived from animals in which an artificial immunity has been created, has been used prophylactically and therapeutically The immunity produced by immune serums is said to last but a few days Aside from the specific treatment the management of a case of plague is entirely symptomatic Treatment is inaugurated with a brisk calomel purge followed by a saline The patient must be kept in bed in a well lighted, well ventilated room The diet throughout the acute stage should be liquid, principally milk and water with the addition of alcohol in cases in which there is great prostration Later a soft bland diet is permitted In convalescence regard must be paid to the probability of change having occurred in the heart muscle and in the kidney The buboes must be dealt with surgically

Resolutions Adopted

The resolutions which are summarized below were offered referred to the council, reported back to the association and adopted

NATIONAL DEPARTMENT OF HEALTH

President Elect Wilson's aid was asked "in securing the passage of the bill now before Congress to establish a department of public health which will elevate the importance of human well being to an equal plane with that of inferior animals, now protected by the almost paternal care of a 'Bureau of Animal Industry' "

MALARIA COMMISSION

Congress was "urged to create a commission for the investigation of malaria, with a view to recommending" measures 'efficient in extirpating the disease" "Such a commission should be amply provided with funds, and invested with liberal powers" "Details of medical officers of the Army, the Navy, and the Public Health Service should be at the service of this commission

PUBLIC INSTRUCTION

"Editors of newspapers and other periodicals published in the South, whether in town or country, are urged to join this crusade against the foes of health, happiness and prosperity by publishing gratuitously such articles and documents as will, in their opinion, advance the cause, and by the still more effectual means of editorial advocacy" A copy of this action was ordered mailed to every newspaper, magazine or other periodical within the geographic boundaries of the association

FEE SPLITTING

Whereas It is stated that among some physicians there has developed a pernicious custom of commercializing the most intimate and sacred confidences committed to their honor by referring their patient who needs special or expert treatment to specialists or surgeons who financially remunerate them for their reference either by paying a commission or by dividing with the regular physician their fees as specialists or surgeons and

Whereas It is prejudical to individual physicians and to the medical profession at large to allow such injurious rumors to circulate unproved or unchallenged and

Whereas It is the duty of our profession to protect the honorable position we have won by generations of faithful unselfish service therefore be it

Resolved By the Southern Medical Association that we earnestly condemn such dishonorable dealings on the part of anyone professing the high calling of medicine

Resolved That we urge all state and county medical organizations vigorously to oppose such dishonorable dealings and to appoint investigating committees whose duty it shall be to learn whether any of their members are thus dishonoring their calling and if any are so accused to summon them before a tribunal of their professional brethren to be acquitted or convicted of this crime against honor and humanity

Resolved That no guilty doctor whether donor or recipient of such a fee or commission in any way shape or manner should be allowed to escape a suitable penalty such as private reprimand temporary suspension or public expulsion

Resolved That these resolutions be spread upon the minutes of this association and that a copy thereof be forwarded by the secretary to every state and county medical organization within the geographic limits defining eligibility to membership in this association

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

Albany (N Y) Medical Annals

November XXXIII No 11 pp 625 686

1 Rural Hygiene H D Pease New York
2 Salicylates in Treatment of Acute Chorea with Report of Nine Cases. N K Fromm Albany N Y
3 Albany Hospital Tenth Annual Report Department for Mental Diseases, Year Ending Sept 30 1912 J M Mosher Albany N Y

American Journal of Insanity, Baltimore

October, LXIX No 2, pp 267 468

4 A Layman's View of Care and Treatment of Insane in State Hospitals of New York H P Bissell New York
5 Three Months Without and Three Months With a Social Service Worker in Mental Clinic at Boston Dispensary L V Briggs Boston
6 State Care of Boston's Insane H P Frost Boston
7 Immigration as Problem in State Care of Insane J V May Albany N Y
8 Korsakow's Syndrome with Synopsis of Cases F B Clarke Chicago
9 Laboratory Differentiation Between General Paralysis and Cereorospinal Syphilis and Serology of Spinal-Cord Tumors D M Kaplan New York
10 *Exciting Causes in Psychiatry A J Rosanoff Kings Park N Y
11 Hereditary Ataxia W C Sandy Trenton N J
12 Relation of Apraxia Problem to Psychiatry I H Coriat Boston
13 *Statistical Study of Manic Depressive Insanity with Special Reference to Physical Illness as Etiologic Factor T A Hoch Worcester Mass
14 Some Technical Methods for Routine Examination of Brain from Cases of Mental Disease S T Orton Worcester Mass

10 **Exciting Causes in Psychiatry**—The material of Rosanoff's study consists of 1,056 consecutive admissions to the Kings Park State Hospital Two hundred and seventy nine cases of imbecility, epilepsy, alcoholic psychoses, general paresis and other organic conditions are excluded from the study, leaving 777 cases In 66 9 per cent of these cases no cause has been assigned, and in 4 per cent conditions have been erroneously assigned as causes in more than half of the cases indications for commitment have arisen in the midst of an average environment and in the absence of occasion of special difficulty or strain In 7 1 per cent the psychosis has been attributed to alcohol the further study of these cases has been postponed In 2 6 per cent the psychosis has been attributed to other physical causes pregnancy, childbirth, lactation, traumatisms, surgical operations and acute infectious diseases In 16 6 per cent the psychosis has been attributed to psychical causes business troubles, death or illness of relatives, love affairs, domestic troubles, etc, and in 2 8 per cent to combinations of physical and psychical causes In one third of the cases in which pregnancy, childbirth, lactation traumatisms or surgical operations have been assigned as causes the relationship between the alleged cause and the psychosis is merely one of accidental coincidence in time there is no etiologic relationship

The remaining two thirds of the cases, however, leave no doubt of these factors being capable of causing insanity, although they do so infrequently In many cases the manner of their action is obscure owing to insufficiency of data in the clinical histories, wherever more detailed data are available it appears that these factors act not as physical causes but through their psychical accompaniments

Only in two cases out of a total number of 777 was the psychosis ascribed to acute infectious diseases, in one to typhoid and in the other to influenza In the first case the anamnesis was furnished by a feeble minded person and is not reliable it would seem that the duration of the psychosis prior to admission was much longer than it was said to be, probably dating back a long time before the attack of typhoid in the second case there is much discrepancy between the data obtained from the various sources, so that even the fact of the patient's ever having had an attack of influenza is not established Excepting febrile and infectious deliria, Rosanoff says the power possessed by the acute infectious diseases of producing insanity is at the most very slight and wholly questionable Leaving aside the matter of complete separation of personal and environmental factors, the exciting causes of the forms of insanity considered appear to be invariably of a psychical nature, and the cases in which no causes are assigned do not differ essentially from others in etiologic mechanism, it so happens that in their histories there is no spectacular event to be recorded as "the cause"

13 **Statistical Study of Manic Depressive Insanity**—During a period of ten years, 703 patients with manic depressive insanity were admitted to the Worcester State Hospital, out of a total of 5,706 patients constituting 12 per cent of admissions Of this number 309, or 43 per cent, have, as far as is known, had only one attack The fact that physical illness was found to be a cause in 24 per cent, or nearly one fourth of the first attacks of manic depressive insanity, Hoch points out to be significant, and of particular interest in the steady falling off of somatic causes in the succeeding attacks

American Journal of Anatomy, Philadelphia

November 15 XIV No 1 pp 1 117

15 Interstitial Granules and Fat Droplets of Striated Muscle H H Bullard New Orleans
16 Fate of Jugular Lymph Sacs and Development of Lymph Channels in Neck of Pig A H Clark Baltimore
17 *Chemical Nature of Certain Granules in Interstitial Cells of Testis R H Whitehead Charlottesville Va
18 *Comparative Study of Three Principal Regions of Spinal Cord in Series of Mammals. P B Bullard New Orleans
19 *Development of Cerebral Cortex E L Mellus Baltimore

17 **Chemical Nature of Certain Granules**—Whitehead concludes that the granules in the interstitial cells of the pig, and probably also of the cat, consist of a combination, either physical or loosely chemical of proteid with fatty material He also shows that the pig's interstitial cells, which contain no individual globules of lipoids, are no exception to the general rule that these cells, aside from any other function that may be ascribed to them, serve as a storehouse for fatty material

18 **Principal Regions of Spinal Cord**—This paper presents some observations based on the study of transverse sections of the three principal regions (intumescentia cervicalis, intumescentia lumbalis and middle of pars thoracalis) of the spinal cord in a series of twenty four mammals An outline drawing of a transverse section of the cords in each region is included together [illegible] tables of [illegible]rements showing variations in d[illegible] ruc[illegible] [illegible]ords mammals at

10 **Development of Cerebral Cortex**—It is the belief of Mellus that all mental development has an anatomic basis In a comparative study of the cellular structure of the so called "Broca's area" in the brains of three individuals there was found a very appreciable difference in the thickness of the cortical layers in favor of the left hemisphere It was almost impossible to say just where this difference lies The counting of cells in a cortical area is extremely difficult, although by no means impossible In many instances the count varies so considerably in contiguous areas of the same convolution, due sometimes to the presence of blood vessels and the doubtful nature of many of the cells, that it is difficult to arrive at satisfactory conclusions As a rule, however, it appears that the deeper cortex has the greater number of cells One would naturally suppose that a cortex increased in depth by increased functional activity would be due either to increase in the volume of the cells or separation of the cells by reason of an increase in the outgrowing or ingrowing processes, or both together From careful and prolonged study of the motor area in the human cortex Mellus is convinced that there are great variations in different individuals in the development of the largest elements, the so called Betz cells

Annals of Ophthalmology, St Louis

October XXI, No 4, pp 669 831

20 Serum and Vaccine Therapy in Connection with Diseases of Eye S Mayou London
21 Two Interesting Cases of Foreign Body in Eye G G Lewis, Syracuse N Y
22 Case of Quinin Amblyopia C B Welton Peoria Ill
23 Relation of Teeth to Eyes W E Bruner, Cleveland
24 Epinephrin in Treatment of Acute Corneal Staphyloma P J Pontius Philadelphia

American Journal of Orthopedic Surgery, Philadelphia

November, X, No 2 pp 171 307

25 *Etiology of Chronic Non Tuberculous Arthritis Miscalled Arthritis Deformans L W Ely Denver
26 Scoliosis E H Bradford Boston
27 *Treatment of Scoliosis (Fixed Type) by Plaster Supplemented by Pneumatic Pressure J P Lord Omaha
28 Industrial Education of Crippled and Deformed H W Orr Lincoln Neb
29 *Simple Operation for Relief of Deformity in Certain Cases of Volkmann s Paralysis L W Ely Denver
30 Absence of Bony Femoral Heads and Necks J Ridlon and H B Thomas Chicago
31 Traumatic Spondylolisthesis Following Fracture of a Congenitally Deficient Fifth Lumbar Vertebra A H Maccordick and J A Nutter Montreal Canada
32 Treatment of Traumatic Flat Foot A H Cilley New York
33 Operative Treatment of Claw Foot. J T Watkins San Francisco
34 *Use of Carl Spengler s I K Serum in Treatment of Tuberculous Joint Disease with Report of Cases H O Eversole and C L Lowman Los Angeles Cal
35 Pathology and Therapy of Congenital Dislocations of Hip R. Werndorf Vienna Austria
36 *Conservative Operative Treatment of Hammer Toe W J Merrill Philadelphia
37 Abdomino-Vesical Support D G Evans London

25 *and* 27 Abstracted in The Journal, August 3, p 392

29 **Deformity in Volkmann's Paralysis**—The contracture in Ely's case was due to some of the deeper intrinsic muscles of the hand, and apparently also to the adhesion of new granulation tissue binding the long flexor tendoons to the front of the proximal phalanges of the fingers He found that when he passed the blade of the scalpel on the flat, close to the anterior surface of the phalanx, dividing these adhesions for a distance of about one half inch, he could easily reduce the contracture, but that until this tissue was divided the contracture could not be reduced The contracture of the thumb was due to a tight contracture of the flexor brevis pollicis and disappeared when this was divided

34 **Treatment of Tuberculous Joint Disease**—The authors report thirteen cases In all but one of these favorable results were obtained from Spengler's I K treatment

36 **Operative Treatment of Hammer Toe**—Merrill transplants the extensor tendons into the metatarsal bone to preserve the function of that muscle and prevent atrophy of it The muscle pull raises the metatarsal head and lessens the tendency to one feature in the mechanism of hammer toe and often relieves an associated metatarsalgia The flexors are implanted into the base of the first phalanx.

Archives of Ophthalmology, New Rochelle, N Y

November XLI, No 6 pp 559 677

38 Distortions of Visual Fields in Cases of Brain Tumor H Cushing and C B Walker Boston
39 Simplified Gram Technic W H Snyder, Toledo Ohio
40 Additional Experiments on Excretion of Hexamethylenamin in Ocular Humors L B Whitham Baltimore
41 Details of Vision of 132 Cases of Intracapsular Extraction of Cataract H Smith

Boston Medical and Surgical Journal

November 21, CLXVII, No 21, pp 715 749

42 Syphilis Treatment Old and New A F Downing Cambridge Mass
43 *Difficulties in Interpreting Significance of Regional Muscle Rigidity and Degeneration About Thorax Diagnostic Limitations J L Pomeroy Monrovia Cal
44 Importance of Early Recognition of Suppurative Otitis Media. P Hammond Boston
45 Survey of Tuberculosis Situation in Massachusetts J B Hawes, Boston
46 Pellagra in Rhode Island A H Harrington Howard R I

November 28, CLXVII, No 22, pp 751 790

47 Contributions of Nineteenth Century to a Living Pathology W J Mayo Rochester Minn
48 *Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax According to Method of Forlanini (To be continued) G M Balboni Boston
49 Under Ether H T Bailey North Scituate Mass

43 **Regional Muscle Rigidity and Degeneration About Thorax.**—From a diagnostic standpoint as to the presence of intrathoracic disease, most probably pulmonary, Pomeroy says that muscle spasm and degeneration is as definite a sign of those processes as similar phenomena in the abdomen In the hands of the expert clinician, one accustomed to the various phases of this problem, muscle changes over the thorax deserve careful study, and give reliable information that inflammatory changes or pathologic processes are to be found in the thorax, provided there is nothing in the peculiarities of the individual which would otherwise satisfactorily account for the signs It must be understood that regional muscle spasm, degeneration and reflex hyperalgesia may result from causes other than pulmonary tuberculosis, but with the limitations outlined in the paper The careful study of these phenomena is recommended to every thoughtful clinician

48 **Artificial Pneumothorax in Lung Tuberculosis**—This is Balboni's first paper of the series He discusses first the historical development of the treatment of tuberculosis by the establishment of an artificial pneumothorax by means of the injection of nitrogen gas, first proposed and practiced by Forlanini in 1882 What was done later in other countries is then discussed, finally the technic and preparation of the patient, the theories as to the action of the pneumothorax and the pathologic changes He has treated twenty one patients All except two are working and have kept at work continuously during the treatment

Journal of Abnormal Psychology, Boston

October VII, No 4, pp 233 312

50 Meaning of Ideas as Determined by Unconscious Settings M Prince Boston
51 Clinical Study of Case of Phobia J J Putnam and M Prince Boston

Journal of Arkansas Medical Society, Little Rock

November, IX No 6 pp 137 156

52 Gall Stones J A Foltz Fort Smith
53 Thoracic Aneurysm Report of Two Cases J H Chestnutt Hot Springs
54 Diagnosis of Some Urinary Affections J K Smith Texarkana Tex

Journal of Medical Research, Boston

November XXVII No 2 pp 115 227

55 *Pertussis Histologic Lesion in Respiratory Tract F B Mallory and A A Hornor Boston
56 *Origin of Giant Cell in Tuberculous Lesions A. M Burgess Boston
57 *Chloroma A M Burgess, Boston
58 *Pleomorphic Bacillus Growing in Association with a Streptothrix H U Williams Buffalo
59 *Complement Fixation in Tuberculosis A T Laird Duluth Minn
60 *Research on Experimental Typhoid Carrier State in Rabbit J A Johnson Philadelphia
61 Blood Cell Picture in Horse-Serum Anaphylaxis in Guinea Pig Kurloff's Inclusion Cells M M Canavan, Boston
62 Studies in Infarction II Experimental Bland Infarction of Lung H T Karsner and J E Ash Boston
63 *Diluting Fluid for Standardization of Vaccines with Hemocytometer J G Callison New York.

55 **Pertussis**—Whooping-cough, the authors believe, is due to a minute bacillus which occurs in large numbers between the cilia of the epithelial cells lining the trachea and bronchi and possibly also the nose The location of the organism is apparently characteristic for the disease Its action seems to be largely mechanical It interferes by its presence with the normal movements of the cilia and possibly leads to their destruction The mechanical interference with the action of the cilia, and possibly their destruction, prevent the normal removal of secretion The bacilli and the secretion produce a continuous irritation which results in coughing and usually also in the characteristic spasm known as whooping The bacillus found in the lesions by Mallory and Hornor, they believe, is probably identical with the organism discovered and described by Bordet and Gengou, but this identity remains to be demonstrated by the experimental production of the characteristic lesion in monkeys and puppies

56 **Origin of Giant Cell in Tuberculous Lesions**—Burgess reports the results of an experimental study of the origin of the giant cells which form around the fat like substance produced by tubercle bacilli The fatty material was injected subcutaneously into guinea pigs and the resulting lesions were studied microscopically at various time intervals In addition, for the sake of comparison, various other substances such as calcium salts, fat, fatty acids and cholesterin were injected in a similar manner and the lesions produced examined in parallel series of sections The results obtained are similar in character but differ in detail They all indicate strongly that these foreign body giant cells originate in only one way—by fusion of endothelial leukocytes

57 **Chloroma**—It is held by Burgess that the tumors to which the term chloroma has been applied do not constitute a pathologic entity On the contrary, they represent a part of the pathologic process in one type of acute myelogenous leukemia Chloroma has not been shown to have any relation to true lymphatic leukemia Myelogenous leukemia is a blood metastasis of a true tumor whose origin is in the bone marrow and whose cells invade the blood stream and bone marrow In certain cases in which the cells are, most of them, relatively undifferentiated and multiply rapidly, other tissues are invaded. Sometimes in this way definite nodules or masses of tumor cells are formed These masses, if green are called chloroma

58 **Pleomorphic Bacillus with a Streptothrix.**—The organisms that form the subject of Williams paper were obtained from a case of tuberculous pericarditis A bacillus and a streptothrix were encountered growing together in a mixture Under certain conditions they resembled each other closely, and nearly led to the belief that one might be transformed into the other Eventually they were separated by plating, and in pure cultures each retains its characteristic properties The bacillus develops into long filaments, with occasional branches, in media containing 1 per cent of dextrose The streptothrix produces single oval spores at the ends of the threads or branches resembling spore formation in some species of bacilli, including the bacillus with which it was associated as above mentioned.

59 **Complement Fixation in Tuberculosis**—The complement fixation test with antigen derived from tubercle bacilli is believed by Laird to be at present of comparatively little diagnostic value It is quite probable that it may be of more aid in diagnosis if better antigen is devised and certain disturbing factors are eliminated Even in the present stage of the development of the test sharply positive reactions are obtained at times and the quantitative study of the various phenomena connected with the presence or absence of such reactions, especially when correlated with clinical findings, promises results of some value in studying the course of the disease The more general use of the Wassermann test for syphilis in institutions for tuberculous patients, he believes is desirable not only for the aid it gives in clearing up a doubtful diagnosis, but also for the purpose of studying the relations between the two diseases

Eighty five tests with the sera of thirty four patients the antigens used being derived from tubercle bacilli, gave complement fixation in twenty four tests These positive results were obtained with the blood of four patients The blood serum of a patient in the moderately advanced stage of the disease, was tested on four different dates and each time gave a completely positive result On May 3, 1911, different dilutions of his serum were tested and complete fixation was obtained with 01 c c of the serum Again on June 28 1911, complete fixation was obtained with 05 c c. of his serum, no higher dilutions being used at this time The patient was doing well during the period covered by the tests. He began taking tuberculin on Sept 5, 1911, which was four weeks subsequent to the first test, and on June 28, 1911, the date of the last test, he had reached a dose of 00068 grm B F Co (a mixture of B F and B E given at the Adirondack Cottage Sanitarium) He was discharged with disease "arrested" The serum of a patient in the moderately advanced stage of the disease without tubercle bacilli in his sputum, was tested on four occasions He had been taking tuberculin treatment since Nov 22 1910 (S.B E) The first two tests were negative On March 7, 1911, the patient had a severe general tuberculin reaction in the course of treatment and on April 20, 1911, his blood gave a completely positive reaction On June 28 1911, this could no longer be obtained He was admitted as a moderately advanced case and was discharged after nine months an "apparent cure" The highest dose of tuberculin reached by him was S B E 0032 c c

The two other positive reactions were obtained on July 7, 1911 from the blood serum of patients who were in the moderately advanced stage of the disease and had tubercle bacilli in their sputum Both were taking tuberculin, but had received only small doses, less than 0000001 gram of O T and B F respectively One was discharged "improved" and the other with 'disease arrested" Beside these tests in which complete fixation was obtained there were a number in which there was partial fixation Complete hemolysis was obtained in sixteen of the tests, although the antigen used alone in the same dose (without the patient's serum) had shown some anticomplementary action This is the so called "inhibitive" reaction of Caulfield, which he believes is characteristic of certain favorable cases or of cases doing well at the time of the test Seven of these sixteen "inhibitive" reactions were obtained with the serum of a healthy control, the remainder were from four patients with moderately advanced disease who were doing well at the time of the test

60 **Experimental Typhoid Carrier State in Rabbit.**—The following summary is made by Johnston The condition analogous to the typhoid carrier state in man can be produced in the rabbit *B typhosus* can be recovered from the blood up to the end of the first month and longer following inoculation and from the feces up to 110 days *B typhosus* can be recovered from the bile approximately from thirty to sixty days after inoculation, and would then seem to become attached to the gall bladder wall, since post mortem examination revealed the presence of *B typhosus* in the gall bladders of nine of eleven unvaccinated animals examined, and no typhoid organisms could be found in the gall bladders of five vaccinated animals so examined An inoculated animal becoming a carrier may have a reappearance of the typhoid organisms in the stools due to a catarrhal condition affecting the gall bladder From the results obtained in this experiment, vaccination would certainly seem to be indicated as a means of treatment in the human carrier, and also as a prophylactic agent in the prevention of such carriers A routine examination of the stools and urine of all typhoid convalescents should be required by municipal health authorities until successive cultures are negative, as is at present the practice with cases of diphtheria

63 **Fluid for Standardization of Vaccines.**—Counting the bacteria in the hemocytometer is the method proposed by Callison For more than two years he has used the following diluting fluid, w [illegible] ed to be so satisfactory

Hydroch' [illegible]	2 cc
Bichlo [illegible]	c
Acid	

His instructions for carrying out his method are as follows

A drop of the filtered solution is placed on the ruled stage of the hemocytometer, covered with a coverslip, and examined with a 4 mm objective The color should be just deep enough not to obscure the ruling If the color is too deep, filter again, as each filtration removes some of the fuchsin If not deep enough, add more fuchsin solution Using the red dilution pipet, draw up the bacterial emulsion to the 5 or 1 mark, and the diluting fluid to the 101 mark Shake vigorously for three minutes, allow two or three drops of fluid to run out of the pipet, then deposit a small drop on the stage of the hemocytometer Cover with a polished glass coverslip and set aside half an hour for sedimentation to occur Make the count with a small diaphragm and a strong light Keep the small square being counted well in the center of the microscopic field Before counting, focus up from the ruled lines to ascertain if all the bacteria have settled on the ruled stage Make the count and the subsequent calculation as for red blood cells The bichlorid forms a mercury albuminate on the surface of the bacteria and causes more rapid sedimentation, the hydrochloric acid keeps the whole in solution, and the acid fuchsin stains the bacteria, making them more visible

Journal of Michigan State Medical Society, Battle Creek

November XI No 2 pp 683 736

64 Benign and Malignant Ovarian Parovarian and Uterine Tumors in Pregnancy Labor and Puerperium A B Keyes Chicago
65 Aphasia C W Hitchcock Detroit
66 Hand Knowledge Its Results and Possibilities for Acquirement H L Simpson Detroit
67 Relation of Convulsions in Children to Dietary Errors I B Jackson Kalamazoo
68 Cirrhosis of Liver I M I Hotvedt Muskegon
69 Functional Test in Surgical Diseases of Kidney I K Cullen Detroit

Journal of South Carolina Medical Association, Seneca

November VIII No 11 pp 285 310

70 *Present Status of Goiter Surgery A B Knowlton Columbia
71 Effects of Sugars and High Percentage of Proteids on Fermental Disorders in Children W Weston Columbia S C
72 Typhoid Perforation Operation Recovery F H Sparkman Charleston
73 *New Method of Operation for Typhoid Perforation L B Owens Columbia

70 and 73 Abstracted in THE JOURNAL, June 15 p 1891

Journal of Tennessee State Medical Association, Nashville

November V No 7 pp 263 307

74 Ocular Manifestations of General Diseases H Wood Nashville
75 *Present Status of Brain Surgery L L Sheddan Knoxville
76 Medical Inertia O Dulaney Dyersburg
77 Salvarsan G R Livermore Memphis
78 Clinical Diagnosis and Treatment of Laryngeal Diphtheria O W Hill Knoxville
79 Treatment of Laryngeal Diphtheria W S Farmer Cookeville
80 Recent Advances in Thoracic Surgery W A Bryan Nashville
81 *Remarkable Case of Katatonia J W Stevens Nashville

75 Abstracted in THE JOURNAL, April 27 p 1309

81 This case was reported in the *Journal of the Tenn State Medical Assn* July 1911 and was abstracted in THE JOURNAL, Aug 12 1911 p 584

Medical Record, New York

November 23 LXXXII No 21 pp 925 970

82 *Calorimetric Observations. C Lusk New York.
83 Etat Vermoulu (Worm State) a Form of Senile Degeneration of Brain E M Williams Philadelphia
84 Case of Chronic Pancreatitis with Polycythemia (Clinical Diagnosis Pancreatic Lithiasis) C A Friedman New York
85 Large Abscess of Temporosphenoidal Lobe Complicating Chronic Purulent Otitis Media R Lewis New York
86 Literary Genius and Manic Depressive Insanity A C Jacobson Brooklyn
87 Bacterin Treatment in Pulmonary Tuberculosis G Sanders New York
88 Milk Supply C Cristadoro Point Loma Cal

November 30 LXXXII No 22 pp 971 1016

89 Psychology of Gambling Habit J L Corning New York
90 Pro and Con of Maintenance of Retro-Auricular Opening After Radical Mastoid Operation S Oppenheimer New York
91 Effect of Present Prevention on Spread of Consumption T J Mays Philadelphia
92 Claudius Galen (131 A D to 200 A D) T W Harvey Orange N J
93 Importance of Local Laboratory in Medical Practice County Laboratory W S Magill Albany N Y
94 *Disinfection of Intestine by Insufflation of Oxygen M Cross New York

82 **Calorimetric Observations**—The results of Lusk's experiments with a dog lead him to the general conclusion that there exist the following forms of metabolism in the quiet or sleeping dog excluded from thermal influences 1 A basal metabolism when the cells are nourished by a blood stream which does not receive food from the intestinal tract and the composition of which is regulated by the organs of the body 2 A metabolism due to plethora induced by an increased quantity in the blood of carbohydrate or fat metabolites which are being absorbed from the intestine 3 A metabolism due to the stimulus of incoming amino acids acting on the cells

The metabolism of plethora and the metabolism of amino acid stimulation cannot be added to each other, there is no summation of effect when both influences are brought into action together In other words, cellular activity induced by the presence of carbohydrate is not further intensified by the stimulus of amino acids unless the latter alone would accomplish the result The height found for the basal metabolism of the perfectly quiet resting organism excluded from thermal influences and determined eighteen hours after the ingestion of food, confirms Rubner's law of skin area, but places the heat elimination at a lower level

As a practical conclusion of these experiments it appears that in a quiet and resting animal the heat production is increased by about 20 per cent after the ingestion of a mixed diet and this increase continues during the period of intestinal absorption also addition of moderate amounts of protein to the diet has little effect on the production of heat even though this protein given alone would of itself cause a considerable rise in the heat production Hence, a mixed dietary is physiologically economical

94 **Disinfection of Intestine by Insufflation of Oxygen.**—Ad Schmidt introduced oxygen directly into the small intestine by means of the duodenal tube ' and the results he reported were very favorable Cross has adopted the following procedure for the oxygen insufflation His duodenal tube is introduced in the morning on an empty stomach down to mark 90 cm which means about 30 cm beyond the pylorus This so called deep exploration is particularly desirable for the present purpose as it prevents the return escape into the stomach of too large quantities of oxygen The outer end of the duodenal tube is now connected direct with the regulator of an ordinary oxygen jar, and the gas is allowed to flow slowly in From time to time when the patient complains of distention the influx is interrupted In this way he has been able to administer any desired quantity of oxygen He endeavors to apply a kind of continuous gas bath" which may last from 1½ to 2 hours Instead of making two insufflations a day as advised by Ad Schmidt Gross allowed in one case the tube to remain in situ from morning till evening and administered the second insufflation in the evening In the meantime the patient received liquid food per os not through the tube Expulsion of odorless flatus could often be observed during the administration, showing that the gas had passed the ileocecal valve

New York Medical Journal

November 23 XCVI No 21 pp 1049 1100

95 Acute Poisoning Its Diagnosis and Treatment in Actual Practice F C Hill Denver
96 Relation of Pregnancy to Certain Conditions of Digestive Organs A L Benedict Buffalo
97 Teaching of Pulmonary Diseases J B Huber New York
98 Insurability of Women Special Reference to Effects of Major Operations T H Bradford Philadelphia
99 Air Impurities C Baskerville New York.
100 Ten Sex Talks to Girls I D Steinhardt New York.
101 Use of Mixed Infection Vaccines in Treatment of Myalgia and Arthritis. R F Brenneman Pittsburgh
102 Therapy of Syphilis J L Mortimer New York.
103 Value of Meteorism or Tympany in Peritonitis B Van Sweringen Fort Wayne Ind.

November 30 XCVI No 22 pp 1101 1152

104 Gastric and Duodenal Ulcers Etiology and Treatment W E Deeks Ancon C Z.
105 Inheritance of Acquired Characters Bacterial Phenomena as Problems of Heredity J Wright New York
106 Urethral Drainage in Treatment of Chronic Urethritis G H Peterson Mount Clemens Mich.

107 Borderline Case a Vital Problem M Sutton New York
108 Induction of Anesthesia L D Frescoln Philadelphia
109 Air Impurities C Baskerville New York
110 *Diet in Carcinoma F G Kessler New York
111 Postyen and Its Natural Hot Sulphur Mud Baths F Ilsko New York

110 **Diet in Carcinoma**—The proteins of the meat diet are all rich in sulphur and in Kessler's opinion ought to be reduced However, he would not go so far as to recommend an exclusively vegetarian diet in carcinoma A vegetarian diet would certainly not according to his opinion, be sufficient for good nourishment with the high rate of waste in carcinoma Proteins with a low percentage of sulphur are the caseins of cow's milk It would also be desirable to reduce the lactalbumin of cow's milk and to use the pure casein Conversely one must exclude a number of vegetable foods that contain a high proportion of sulphur To prevent cancer or metastases on the lips or in the mouth smoking ought to be stopped In smokers the production of sulphocyanic acid is increased Sulphocyanic acid is a compound of neutral sulphur It diminishes the oxidation of sulphur Most likely Kessler says, this is to be attributed to the influence of the nicotin The diet which he would recommend in carcinoma would be somewhat of the following scheme, to be modified according to the taste of the individual

Breakfast Tea or coffee with sugar and cream (not milk on account of the lactalbumins), little bread with much butter fresh or cooked fruit

Dinner Soup of fruit or cereals or vegetables (not meat broths), peas, lentils, beans, for change meat, 2 ounces at the most purée of potato dumplings edible roots (carrots, beets), boiled or preserved fruits, rice salads

Supper Fruits with rice, potatoes with butter, salads

The nourishment should be plentiful The necessary quantity of casein, 1 or 2 ounces can be mixed with butter and used with the various meals The casein can also be added to the various soups purées of potatoes, and to the dishes of vegetables during the process of cooking In order not to cause any aversion of the patient to the casein it must be absolutely pure and tasteless A flavoring addition to the casein of stewed tomatoes and the like is also permitted The casein may also be given in the form of a medicament, in dry powder in one half to 2 dram doses, every three hours, between meal times, and is best taken down with a swallow of water

New York State Journal of Medicine, New York

November XII No 11 pp 621 686

112 Results Obtained with Antityphoid Vaccine in U S Army to End of 1911 F F Russell U S Army
113 Tropical Climate and Its Physiologic Effects J M Phalen U S Army
114 Prophylaxis of Some Tropical Infections F M Shook U S Navy
115 Practical Results of Surgery in Epilepsy G K Collier Sonyea
116 *End Results of Head Surgery in Epilepsy J F Munson Sonyea
117 *Indications for Surgical Intervention in Epilepsy F A Sharp Buffalo
118 Six Cases of Hereditary Chorea F P Ballentine Rochester
119 Death While Using Nitrous Oxid and Oxygen as Anesthetic P J Flagg Yonkers
120 Experiences with Hormonal in Treatment of Acute and Chronic Intestinal Paresis J T Pilcher Brooklyn
121 Pathogenesis Anatomy and Cure of Prolapse of Rectum A V Moschcowitz New York
122 Surgical Constipation S G Gant New York
123 Gall Stones P Syms New York
124 *Cancer of Prostate F Fuller New York
125 Public Hospitals of New York State R W Hebberd, Albany

116 **Head Surgery in Epilepsy**—There can be no question says Munson that in the past there has been much ill advised and indiscriminative operative intervention in the epilepsies, and some of the cases, viewed either from the purely surgical point of view or from the standpoint of the epileptologist are sad commentaries on the ill judged activity of the surgeon He reports nineteen cases in which some surgical intervention was undertaken on the head, and which afterward came to autopsy In some cases the scar tissue formation has been the evident cause of continued irritation and in others there was cerebral destruction which was sufficient to cause the attack, but in others there was apparently both a successful operation and an absence of lesion Why, then asks Munson, the ill success? He has frequently expressed his idea of the origin of epilepsy as an equation in which the sum of a varying number of known unknown and variable quantities is placed equal to the seizure, i e causes the seizure It would appear from this that the etiology of any case was a summation and therefore unless one of the etiologic quantities was decidedly greater than the others, the treatment of any one of them would not cure the case Munson believes that this is true In looking over the cases which have been made the subjects of operation, there is found for example, a decided neuropathic taint in many of the family histories and if this is to be accepted as an important etiologic quantity, one must admit that it cannot be excised along with some focal lesion or drained away by a drainage and decompression operation Similarly some patients who desire operation have alcoholism or venereal excesses as part of their etiologic equation There again the knife is handicapped In some of the traumatic cases the trauma is not the cause, but is the result, of the first seizure and therefore the operation is of secondary importance

117 **Surgical Intervention in Epilepsy**—Out of the total number of 3,502 patients admitted to the Craig Colony for Epileptics forty eight had been trephined either before admission or during their treatment at the Colony In a few of these the operation had been repeated Naturally none of the patients operated on at the Craig Colony have been trephined immediately after a trauma or the onset of the epilepsy, as they were all confirmed epileptics at the time of admission The results of operation on these patients cannot be compared with those obtained by operation immediately after the trauma or in the early stages of the epilepsy None of the patients trephined at the Colony have been permanently relieved from the attacks although most of them were benefited, at least temporarily by the operation In several cases in which operation was done before admission, the condition of the patient had been made worse by the operation as was stated in the histories at the time of admission In some of these cases the relationship to trauma or focal irritation was very remote or questionable the slight trauma to which they were attributed acting merely as an exciting cause in a susceptible individual Some of the trephined cases were done for conditions other than traumatism Convulsions following encephalitis or meningitis may be considered as epilepsy due to gross brain lesions Operation is indicated in those cases in which a Jacksonian type of seizure suggests a focal lesion Unfortunately for the operative results such a lesion may not be limited to the Rolandic region nor even situated in this area, but in one of the surrounding lobes or deeper structures and produces the convulsions by irritation of the motor area As a general rule the more a convulsion is limited to one extremity or part of an extremity, the more localized is liable to be the cortical irritation and the greater the chances for arrest of the seizures by removing this focus When a definite injury to the head has been sustained if of such a nature that fracture or hemorrhage is suspected Sharp says it is better to operate at once and remove clots depressed bone etc before the irritation leads to epilepsy for unfortunately the convulsions once started may persist as confirmed epilepsy even after removal of the exciting cause When epilepsy has already developed as a result of trauma to the head a single operation may produce arrest of the attacks In some cases in which the attacks have ceased for a year or two following the operation and then return it has been the custom with some surgeons to trephine again Sharp's observation is that if the first operation with a fair amount of decompression, does not produce relief it is useless to repeat the surgical measures

124 Abstracted in The Journal, May 11, p 1475

Old Dominion Journal of Medicine and Surgery, Richmond, Va

November XI No 5 pp 231 278

126 Mastoiditis with Observations on 150 Patients R H Wright and S C Bowen Richmond Va
127 Medicine in Lay [illegible] B V [illegible]lph Washington D C
128 Racial Pett[illegible] [illegible]logic Viewpoint [illegible]

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Annals of Tropical Medicine and Parasitology, Liverpool

October 18, VI No 3 pp 327 413

1 *Experiments with Crude Phenol as Larvicide in British Guiana K S Wise and E P Minnett
2 Morphology of Trypanosoma Gambiense and Trypanosoma Rhodesiense in Cultures Comparison with Developmental Forms Described in Glossina Palpalis J G Thompson and J A Sinton
3 Spirochaeta Ctenocephali sp nov Parasitic in Alimentary Tract of Indian Dog Flea, Ctenocephalus Felis W S Patton
4 Outbreak of Canine Piroplasmosis Due to Piroplasma Gibsoni Among Hounds of Madras Hunt Together with Successful Treatment of Disease with Salvarsan T H Symons and W S Patton
5 Attempts at Cultivation of Malarial Parasite by Bass Method J A Sinton
6 *Urriola s Test for Malarial Infection J A Sinton
7 Early References to Tropical Diseases C Singer
8 Occurrence and Distribution of Herpetomonas Pediculi H B Fantham
9 Influence of Meteorologic Conditions on Development of Trypanosoma Rhodesience in Glossina Morsitans A Kinghorn and W Yorke

1 **Crude Phenol as Larvicide in British Guiana**—The authors are inclined to the belief that, in the case of a temporary small collection of water, if crude phenol is applied it does not evaporate to any large extent but concentrates as the puddle dries up, and further, that, having dried up, the ground is sufficiently impregnated with the phenol to render water deposited later by a shower of rain fatal to larvae Sufficient data have, however, not yet been collected to make an authoritative statement on this point Laboratory experiments showed that a dilution of 1 in 20,000 is efficient as regards all larvae inside two hours, but in the case of pupae a much longer time is required, probably owing to the fact that the pupa possesses a thick chitinous shell and has no alimentary canal into which to take the poison For use they calculate one teaspoonful to every 2 cubic feet of water or 1 ounce to 16 cubic feet, this gives a dilution of about 1 in 16,000, and allows a fair margin of safety to cover errors in calculation The crude phenol containing all its impurities is much more efficient than the purified, more highly soluble product

6 **Urriola's Test for Malarial Infection**—Sinton does not believe in the value of Urriola's test (discovery of malarial pigment in the urine) He says that it is almost impossible to exclude the possibility of the pigment derived from extraneous sources finding its way into the urine, and therefore the presence of small quantities of fairly large masses of pigment appears to him to be of no diagnostic value The trouble necessary to exclude the possibility of extraneous pigment appears to be too great in comparison with the value of the test As far as can be concluded from the few patients examined by Sinton, the presence of pigmented leukocytes or casts appears to be of more value than free pigment in making a diagnosis of present or past malaria, especially in chronic cases The presence of pigmented leukocytes or casts does not seem to be an indication of act[illegible] the fact that the patient has [illegible] ve malaria but rather of malaria Two of his pati[illegible] at some time or other had being discharged as cure[illegible] of malaria for two ye[illegible] nts were examined just before leukocytes The p[illegible] One of them had had no signs ably represents [illegible] s yet both patients showed pigmented infection and [illegible] sence of such pigment in the urine probably [illegible] an attempt by the body, both during an [illegible] after the infection has passed off, to get rid of the pigment deposited in the tissues

British Medical Journal, London

November 16 II No 2707 pp 1349 1428

10 Duties of State in Regard to Tuberculosis A Ransome.
11 Tuberculosis in General Practice J A Gibb
12 Importance of Toxin Saturation of Tissues E E Prest
13 *After Results of Major Operations for Tuberculous Disease of Joints H J Stiles
14 Dyspepsias of Childhood After Period of Infancy R Hutchison
15 Fibrous and Fibrocystic Osteitis R C Elmslie
16 Spasmodic Contraction of Peronei in Flat Foot G C F Simpson and N Dunn
17 Spasmodic Club Foot T R W Armour
18 Physiologic Scoliosis M Jansen
19 Imperforate Anus with Perineoscrotal Orifice G H Edington
20 Recent Case of Lorenz s Operation Demonstrating by Roentgen Rays the Development of Acetabulum W S Haughton
21 *Tuberculous Infection and Tuberculous Disease in Infancy and Childhood C P Lapage
22 System of Printed Anamnesis Questions for Children Out Patients. F C Eve
23 Psychoses of Climacteric. R P Smith C J Macalister and T B Grimsdale

13 **After-Results of Operations for Tuberculous Joints**—During the ten years from 1901 11 Stiles has done sixty three excisions of the knee for tuberculosis and of these thirty eight have been traced In twenty three of the patients there was osseous as well as synovial disease, the former being sometimes in one bone, but in the majority of cases in both Healing by first intention resulted in fifty three cases, while in nine cases the wound broke down or recurrence set in within a month after operation Twelve out of the sixty three patients required a subsequent amputation, and of these nine were under 5 years of age Of thirty patients who have been traced and recently examined, there was absolute ankylosis in twenty nine and slight movement in one case. In twenty seven instances there was a little flexion, the leg was absolutely straight in one case, and in a position of genu recurvatum in two cases

He has done fifty nine excisions of the hip and of these forty cases have been traced In fifty three there was osseous as well as synovial disease, the former being sometimes in one bone, but in the majority of cases in both Usually, however, the disease was too far advanced to say whether the disease in the bone was primary or secondary With regard to the mode of excision, the anterior route was employed in only eight cases, nearly all of which were among the early series, four were done by an external incision and the remainder by Kocher's postero external angular incision, this method being employed even in cases in which there was an anterior abscess Forty eight patients were discharged with the wound completely healed and the limb maintained in the abducted position by means either of plaster of Paris or an abduction splint In three cases disarticulation of the hip was subsequently performed on account of recurrence of the disease, followed by sinuses and hectic fever, one of these patients died four days after operation Five patients returned with slight recurrence of disease necessitating further operation Forty three patients were found to be well, and with the limb in good position when they returned from two to six months later to have the plaster removed Out of forty cases traced there were twelve deaths, two died in hospital of tuberculous meningitis, nine died within six months of general tuberculosis and the twelfth eighteen months later from the same cause The results were good in nineteen cases, that is to say, the general hea[illegible] excellent, the hip ankylosed no sinuses, the scar[illegible] decolorized and any shortening, adduction or [illegible] flexion only ver[illegible] moderate

[illegible] excisions of the elbow The rig[illegible] elbow was affected in thirty two instances the left in twent[illegible] two the difference being due, probably, to the greater use [illegible] the right arm In 67 per cent of the cases the disease beg[illegible] before the age of five years, while in 32 per cent it show[illegible] itself within the first two years As a result of this ear[illegible] age incidence a relatively large proportion (55 per cent) [illegible] the excisions were done in children under 4 years of age [illegible] fourteen cases the disease was primarily synovial, in t[illegible] remaining forty one or other, or all three, bones were a[illegible] involved The humerus was involved in twenty cases, t[illegible] ulna in thirteen, the radius in three, while in eight cases m[illegible] than one bone was involved Of the fifty four excisions of t[illegible] elbow thirty four have been traced. Of these, six patie[illegible] died subsequently of general tuberculosis from three mont[illegible] to two and a half years Some degree of local recurre[illegible] occurred in eight cases, one of which fails to be classed am[illegible] the deaths Only one required subsequent amputation [illegible] the remaining six the recurrence took the form either of [illegible] abscess or sinus, with slight disease in the subjacent bone [illegible] all of these healing was brought about by a comparativ[illegible] trivial secondary operation.

Of twenty nine cases of tuberculous disease of the ankle joint operated on during the decennium mentioned, the disease was primarily synovial in six cases, while in twenty three cases it was both synovial and osseous. The astragalus was involved in fifteen cases, the os calcis in five, the tibia and fibula in two and the scaphoid in one. In those cases in which it was manifest that the disease was osseous in origin, the primary focus was almost invariably situated in the head or neck of the astragalus. In thirteen of the patients the disease began in children between 2 and 4 years of age, while in twenty one out of the twenty nine cases the operations were performed on children between 1 and 4 years of age. Twenty five patients have been accounted for. Two died within three months of operation. One, who had also hip joint disease, died a year later from general tuberculosis. In six cases amputation was subsequently performed for recurrence of the disease.

21 **Tuberculous Infection and Tuberculous Disease in Infancy and Childhood.**—Tuberculous infection, according to Lapage, almost inevitably is in large towns and it must often occur in childhood without giving rise to illness sufficiently pronounced to attract attention, or the indefinite illness, if noticed, is put down to some other cause, such as rheumatism or underfeeding. Occurring at an early age, tuberculous infection often leads to fatal results, but later in childhood it may lead only to a temporary debility and then become quiescent. Such quiescent disease, which can only be diagnosed from the history, the Roentgen ray examination, and the tuberculin test, is not infectious, and since it is so wide spread it is not necessary to notify every case that gives a reaction to tuberculin. To do so would be to overwhelm those engaged in preventive measures and to stultify their efforts. Tuberculous disease in children is very different from that in adults. All through childhood it tends to become generalized and a large proportion of the deaths are due to tuberculous meningitis. The glands are often affected and the disease may make considerable progress in them before it spreads to other parts or gives localizing symptoms. Therefore we must not look for definite physical signs before making a diagnosis of tuberculous disease. Lapage relies on the history, the general symptoms and the special methods of diagnosis to begin treatment early.

Edinburgh Medical Journal

November IX, No 5, pp 385 480

24 Place of Pathology in Medical Curriculum. J L Smith
25 Habit Exemplified in Functional Activity of Eye Muscles. G A Berry
26 Eclampsia in Edinburgh Maternity Hospital with Special Reference to Its Seasonal Incidence. J H Croom.
27 Situation of Lesions in Osseous Tubercle. J Fraser
28 Transplantation of Ovary in Human Being. Record of Three Cases. H S Davidson

Journal of Laryngology, Rhinology and Otology, London

November XXVII No 11 pp 5[illegible]-632

29 International Collective Investigation of Ozena. A. B. Kelly
30 Resection of Partial Nasal Septum for Double Sphenoidal Sinus Suppurative. P Watson Williams
31 Mineral Water and Climatic Cures in Oto-Rhino-Laryngology. G de Parrel
32 Malignant Diseases of Upper Air Passages. Two Cases of Epithelioma. J Price Brown

Lancet, London

November 16 II No 4655 pp 1343 1414

33 Modern Combat Against Tuberculosis Among Children. Nietner
34 Motor and Speech Paralysis Due to Cerebral Angiospasm. W Russell
35 Respiratory Neuroses. S West.
36 *Treatment of Sarcoma of Long Bones. F Eve
37 Results of Complete Removal by Operation of Transplanted Mouse Cancer. C E. Walker and H E. Whittingham.
38 Duty of Practitioner in Cases of Ophthalmia Neonatorum. S Stephenson

36 **Sarcoma of Long Bones.**—In one case of [illegible] of the tibia Eve united the femur and tibia by bolting them together with a portion of the patient's own fibula, a gap of nearly [illegible] inches being left between them and the limb thereby lengthened. Later skiagrams appeared to show that there was a new formation of bone beneath the periosteum of the [illegible] fibula. It is now a year and seven months since the [illegible] there is no recurrence and the patient can walk with a [illegible] plastic support, but the union is not firm and the shortening amounts to 4½ inches. Eve says that when autoplastic grafts are used the periosteum of the graft should be preserved. Eve is convinced that a certain number of sarcomata disappear under, or are profoundly influenced by, the Coley toxins, but says we have no means of determining what proportion this is to the total number treated. He believes it is only a small proportion. His present attitude is that he would not recommend Coley's fluid in any case of operable sarcoma, nor would he recommend it as a prophylactic against recurrence.

Quarterly Journal of Medicine, London

April V, No 19, pp 309 408

39 *Association Between Mitral Stenosis and Renal Fibrosis. J Cowan and G B Fleming
40 *Triple Rhythm of Heart Due to Ventricular Extrasystoles. G B Fleming
41 *Diagnosis of Sinus Arhythmia. J D Windle
42 *Origin of Premature Contractions. T Lewis and M D Silberberg
43 *Blood Pressure Variations Associated with Lumbar Puncture and Induction of Spinal Anesthesia. H T Gray and L Parsons
44 Edema of Orbital Tissues. J H Abram
45 Syphilitic Pseudo Tabes. Report of Case. W B Warrington
46 *Sinus Arhythmia of High Grade Induced by Digitalin. I F Laslett
47 *Auricular Fibrillation Associated with High Degree of A V Block and Paroxysmal Tachycardia. C L Lea
48 Congenital Occlusion of Duodenum. E M Cowell

39 **Mitral Stenosis and Renal Fibrosis.**—The relationship between the two lesions, according to the authors, may conceivably arise in various ways. It may be accidental, the renal lesion may be the cause or the result of the mitral disease, or both may own the same origin. Figures quoted seem sufficient evidence that the association is not simply accidental, for Newton Pitt found that mitral disease is three times more frequently present in cases of granular kidneys than when kidneys are normal, and in the author's series the proportion is even greater [fibroid kidneys, 335 cases, mitral disease, 60 (17.9 per cent.) Kidneys not fibroid, 807 cases, mitral disease, 33 (4.0 per cent.)]. There is no doubt that the majority of cases of mitral disease are the result of an antecedent acute endocarditis of rheumatic origin. They have collected a series of 479 cases of organic mitral disease and in 27[illegible] (57.4 per cent.) the patients had suffered from some form of rheumatism or from chorea.

In a small number of cases of mitral stenosis no recognized cause of acute endocarditis can be discovered in the antecedent history, and in another group it seems unlikely, from the history of the case, that such causes, though they had been present, could be associated with the origin of the valvular lesion. It is generally agreed that the most frequent causes of these chronic cases are arteriosclerosis and chronic nephritis, and in three cases seen by the authors, the kidneys were more or less granular and the capsules adherent. It thus seems evident that in some cases the renal lesion is the cause of the cardiac one, but it is improbable that this is the common sequence. It is true that the incidence of mitral disease in cases of renal fibrosis is much greater than in cases where no renal fibrosis obtains, but the incidence is much greater in women than in men, a fact which suggests that the connection arises in other ways. The post mortem evidence makes it fairly evident that renal fibrosis cannot be the cause of mitral stenosis in all the cases in which the two lesions co-exist, and the inference is strengthened by examination of the clinical data. The evidence seems to show that mitral stenosis and renal fibrosis may own the same cause.

40 **Triple Rhythm of Heart.**—It is suggested that the rhythmical production of [illegible] at an abnormally irritable [illegible] in the ventricles may produce these [illegible]

41 **Diagnosis of Sinus Arhythmia.**—[illegible] that irregularity of the heart in children during convalescence from febrile illness is common. [illegible]

mechanism is normal, sinus arhythmia, a form of irregularity which is devoid of any pathologic significance whatever. The frequent occurrence of sinus arhythmia after acute illness in children is not generally known to practitioners, and the irregularity is confused with those of pathologic origin. Its recognition is important, otherwise the patient is needlessly kept in bed and subjected to unnecessary treatment until it becomes manifest that the irregularity is a negligible symptom. While, as a rule, the diagnosis of sinus irregularity is readily made on clinical examination, exceptionally it is only established from records of the heart's movements and respiration. The cases described in the paper illustrate possible fallacies in the *interpretation of tracings*.

42 **Origin of Premature Heart Contractions.**—The electric curves of premature contractures obtained by the authors in repeated examinations of the same patients show a remarkable constancy of outline, this fact is regarded as evidence of the constancy and limitation of the focus of irritation in which they are produced. There are facts which suggest but do not allow them to conclude finally, that premature ventricular contractions arise, as a rule in the special tissues which unite the auricular and ventricular musculature.

43 **Variations of Blood-Pressure.**—It is stated by the authors that in lumbar puncture the puncture of the skin is accompanied by a rise in blood pressure which varies in extent with the degree of consciousness the pain, and the disturbance produced by the operation, but which is not accounted for entirely by these factors. Withdrawal of cerebrospinal fluid tends *per se* to lower the blood pressure, but the net result of lumbar puncture is to raise it for at least twenty minutes afterward. The type of blood pressure chart obtained in lumbar puncture when the increased intracranial pressure is of subtentorial origin, is the same as that obtained in normal individuals, or as that obtained when the increased pressure is of supratentorial origin but in the subtentorial types the variations are less pronounced. In subtentorial cases the rise is more sustained. Blood pressure records from cases of high spinal anesthesia show at the outset an abnormally high blood pressure due to mental anxiety then a rise following lumbar puncture next a 'preliminary fall" followed by a further more marked 'main fall" as the paralysis affects the thorax. Finally, as the paralysis passes off, the blood pressure rises to its original value. Variations in the pulse rate do not closely follow those of the blood pressure but a certain degree of resemblance is often seen owing to the consciousness of the patient. Vomiting during spinal anesthesia is due to thoracic paralysis. In the supine position there is no stagnation of blood in the great vessels, even when very high spinal anesthesia is induced.

46 **Sinus Arhythmia of High Grade Induced by Digitalin.**—Three cases are described by Laslett which developed sinus arhythmia of high grade under the influence of digitalin. Two of the cases had a preexisting impairment of conductivity notwithstanding which the grade of heart block was not increased by digitalin so far at least as to cause ventricular silences. The first case exhibited an unusually well developed two peaked presystolic wave in the jugular pulse. The first wave was undoubtedly and the second probably auricular in origin. The peculiar form of the wave is regarded as evidence of hypertrophy of the right auricle. The third case showed an extreme sensitiveness to the drug which it is suggested, may have been in some way related to the fact that the auricles had just previously been in a state of fibrillation.

47 **Auricular Fibrillation.**—A case is recorded by Lea of auricular *fibrillation associated with a high degree of auriculo* ventricular block and with attacks of paroxysmal tachycardia of (probably) ventricular origin.

Annales de l'Institut Pasteur, Paris

October XXVI No 10 pp 737-824

49 Coagulation of Blood and Origin of Thrombin. J Bordet and L Delange. Commenced in No 9.
50 Action of Manganese on the Aspergillus Niger. (Extraordinaire sensibilite de l aspergillus niger vis a vis du manganese.) (Rôle capital du manganèse dans la production des conidies de l aspergillus niger.) G Bertrand.
51 Leprosy in Rats. II. F Marchoux and F Sorel.
52 Experimental Research on Schmorl s Bacillus. (Etudes sur le bacille de la nécrose.) E Césari.
53 Physiologic Studies on Anaphylaxis. (Les variations de l alexine après le choc anaphylactique dans la sero-anaphylaxie active et passive.) J F A Delille.

Archives Générales de Chirurgie, Paris

October VI No 10, pp 1133-1260

54 *Old Spina Bifida. F Tournier and J Ducuing.
55 *Dermoid Cysts of the Mesentery. J Pakowski.
56 *Fascia Lata Flap for Dura Repair. (Plastiques dure meriennes avec le fascia lata.) L Mauclaire.

54 **Old Spina Bifida.**—Tournier and Ducuing report ten cases which sustain their statements in regard to the indications for operative treatment, that is, excision of the tumor when it is complicated with nervous symptoms of no longer than a year's duration at most or when the tumor is free from complications but is of annoying size. When the nervous symptoms are of long duration palliative treatment should be the rule, some orthopedic operation elsewhere than on the spina bifida offering the only prospect of benefit. Under all other conditions operative treatment is contra indicated.

55 **Dermoid Cysts of the Mesentery.**—Pakowski summarizes thirty cases from the literature classifying them according to the location of the cyst and discussing treatment. The preferable technic is removal of the cyst but the clinical experiences and his own experimental research show that it is necessary to resect the segment of intestine if the circulation has been impaired by the excision of the cyst.

56 **Fascia Flap for the Dura Mater.**—Mauclaire reiterates that the fascia lata is peculiarly adapted for repairing defects after herniotomy and in the dura mater reporting a case in which it was used for the latter purpose and reviewing the literature on the subject.

Bulletins de la Société de Pédiatrie, Paris

October XIV No 7 pp 12 400

57 *Administration of Salvarsan by the Rectum in Children. (L absorption rectale des arséno aromatiques chez l enfant.) A J Weill Morel and C Mouriquand.
58 *Uremia in Infants. (La forme somnolente de l azotémie du nourrisson. Son diagnostic avec la méningite tuberculeuse.) P Nobécourt and Maillet.
59 *Diabetic Boy of 8. (Exposé d un cas de diabète infantile.) P Merklen.
60 *Pyopneumothorax and Pleural Gurgling. (Pyopneumothorax et bruit du glouglou pleural.) J Renault and P Lévy.
61 *Enlarged Thymus Returns to Normal Size Under Roentgen Rays. Three Cases. E Albert Weil.

57 **Absorption of Salvarsan by the Rectum.**—Weill reports three cases in which he was able to demonstrate the absorption of salvarsan from the rectum of children between 10 and 13. The technic was the same as for intravenous injection, with addition of 5 or 10 drops of laudanum. The rectal injection was given as slowly as possible the rectal catheter introduced deep and the injection retained for four hours at least. He did not see any evidence of local or general by effects and he thinks this route is peculiarly advantageous for children.

58 **Uremia in Infants.**—Nobécourt states that urea was found in the cerebrospinal fluid in thirty nine of eighty nine sick infants in his service. Whenever the proportion of urea was over 0.5 gm per liter the children all died in less than a month. In some cases the uremia causes a clinical picture resembling that of the somnolent form of tuberculous meningitis except that there is myosis and no lesions in the fundus of the eye, mydriasis is more common in meningitis. Another difference is that in the uremic the pulse persists regular and is not much accelerated in meningitis the pulse is extremely irregular while the respiration is but slightly modified. In *uremia the respiration is very abnormal* even a Cheyne Stokes type being common. The gastro intestinal disturbances with uremia frequently subside but in both uremia and meningitis there is the increasing somnolency with progressive emaciation. In the two cases described the infants were under 3 months old while meningitis is rarely observed so young. Decisive evidence is afforded by lumbar puncture urea will be found present in large amounts from 0.51 to 3.15 in his cases, in meningitis in infants he never found over 0.25 gm.

59 **Diabetes in a Child.**—Merklen gives the metabolic findings systematically recorded through nine months in a case of diabetes in a boy of 8 No treatment proved durably effectual and the child died finally in coma

60 **Pyopneumothorax.**—Renault reports a case which confirms the importance of the single bubble sound as a sign of pyopneumothorax in a child The sound is elicited by placing the child in a jack knife position on his hands and feet with his legs stiff the buttocks very high the head close to the legs The chest of the child is then lifted up until he stands erect during which auscultation will reveal a single sound as an air bubble makes its way from below upward and bursts at the surface of the fluid Repeating the maneuver brings the sound anew each time This sign of the fluid and air accumulation may be evident before there is anything else to suggest its presence

61 **Roentgenotherapy for Enlargement of the Thymus**—Weil calls attention anew to the remarkable efficacy of Roentgen exposures in reducing the size of an abnormally large thymus His four cases bring to eleven the number on record in all of which the measure proved successful He does not apply large doses finding the mild amply sufficient There was no further trouble forty eight hours after exposure to from 1 to 5 H units, with a filter, 18/10 He does not think it necessary to do more than reduce the size of the thymus it is not necessary to destroy it altogether His patients were infants between 2½ and 9 months old The number of exposures ranged from five to twelve as a rule, although Meyer gave forty seven very mild exposures in his case

Presse Médicale, Paris

November 6 XX No 91 pp 921 928

62 *Improved Technic for Operative Relief of Gastric Crises etc Excision of Spinal Ganglia (Ganglicetomie rachidienne dorsale) J A Sicard and E Desmarest
63 Hemolysis in Tuberculosis (Anémie hémolysinique tuberculeuse) E Weill C Gardère and A Dufourt

62 **Excision of Spinal Ganglia**—Sicard and Desmarest give an illustrated description of an operation which breaks the continuity of the spinal nerves as by the Förster and Franke methods while it seems to be free from their uncertainties and the possible dangers of both They insist that if the Franke operation is done in a way to be harmless it fails to accomplish its purpose, while if it is thoroughly done it is dangerous Dejerine has reported a death on the table from double pneumothorax occurring during a Franke operation and they have had a similar fatality in their experience An illustration of the findings on the cadaver show that the operation acts more on the anterior than on the posterior roots of the intercostal nerves and thus fails largely of its purpose The technic proposed is to resect the ganglion after laminectomy not opening into the dura mater it is thus an extradural spinal ganglieclomy It is applicable only to the intercostal nerves and laminectomy in the dorsal region they regard as comparatively simple The nerve in its dura mater sheath is ligated with O silk close to the spinal cord and the nerve farther along is seized with forceps The nerve in its intact sheath is then cut with scissors close to the ligature, and the other end is torn loose by twisting it up gently on forceps The nerve tears beyond the ganglion which is thus brought away whole entirely outside of the dura As the ligature is drawn tight the patient may stop breathing and the pulse grow faster, but these reflex phenomena last only a few seconds The various steps of the operation are illustrated and a case described in which it was successfully applied The patient was a man of 44 with tabetic gastric crises lasting two or three weeks at a time and recurring about every two months He had been clamoring for operative relief of some kind for two years, and the above technic was applied last July After laminectomy from the fifth dorsal to the ninth dorsal vertebrae the epidural space was freed from fatty tissue and the ligature was thrown around the seventh left intercostal nerve between the cord and the ganglion The ganglion was then excised by cutting the nerve above and tearing the nerve below the ganglion The same procedure was repeated on the other side extracting the sixth and seventh dorsal ganglia Not a drop of cerebrospinal fluid escaped the dura mater not being opened at all as each sheath had been closed by the ligature before it was cut Only three ganglia were resected as the patient was so debilitated and did not stand the chloroform well The wound healed promptly and the man has been free from gastric crises since but the preexisting lightning pains in the limbs and bladder symptoms still continue and the latter seem to have increased in intensity A zone of anesthesia on the right has developed corresponding to the ganglia excised Sicard and Desmarest think that the lesions in tabes are too diffuse to permit much operative relief, but that intercostal neuralgia might be arrested by this operation and that this is its most promising field Not long ago they performed a Franke operation to relieve the paroxysmal pain left from an intercostal zona No benefit was derived but they are convinced that this method of gangliectomy would have certainly cured their patient

Semaine Médicale, Paris

November 13 XXXII No 46 pp 541 552

64 Unequal Dilatation of the Pupil in Cerebral Hemiplegia M Klippel and M P Weil

Archiv für Gynaekologie, Berlin

XCVIII No 2, pp 221 412 Last indexed October 26 p 1579

65 *Diagnosis of Pyelitis and Dilatation of Kidney Pelvis (Zur Kenntnis der Pyelitis und Nierenbeckenerweiterungen während und ausserhalb der Schwangerschaft) G Schickele
66 Histologic Research on Route of Infection of Tuberculosis of Uterine Adnexa R Keller
67 Congenital Deformity (Zur Teratogenie) F A Kehrer
68 *Thyroid Disease During Pregnancy (Schilddrüsenerkrankungen in der Schwangerschaft) W Rübsamen
69 Injection of Drugs into the Uterine Cervix Tissue in Treatment of Severe Hemorrhage with Acute Inflammatory Disease of the Adnexa (Zur Behandlung schwerer Menorrhagien bei akut entzündlichen Adnexerkrankungen durch Portioinjektionen) C Koch
70 Kidney in Pelvis (Zur kongenitalen Dystopie der Niere—Beckenniere) R Bretschneider
71 *Eclampsia Result of Defective Elimination of Substances Produced to Nourish the Fetus (Eclampsia gravidarum und Paresis puerperalis) C Persson
72 Toxicity of Urine of Parturients (Verhalten der Harngiftigkeit in der Schwangerschaft in der Geburt und im Wochenbette mit Berücksichtigung der Eklampsie) P Esch
73 Pathologic Young Human Ovum (Ein junges pathologisches menschliches Ei) Todyo

65 **Dilatation of Kidney Pelvis**—Schickele says that roentgenoscopy of the kidney will frequently show that the pelvis and ureter may be distended without inflammation and that the pain is merely the result of accumulation of urine above some compressed point generally in pregnant women Treatment therefore need be only rest removal of the compression and copious drinking In case of infection injection of a local disinfectant is indicated The main point he emphasizes is that a gynecologic examination should always accompany roentgenoscopy of the kidney pelvis Ascending infection from the bladder is often due to some interference with the normal outward stream through the ureters although blood borne infection may be involved This is suggested by the rapid occurrence and rapid disappearance of the symptoms and by discovery of the germs in the uterus secretion blood and urine The colon bacilli may also find their way into the right kidney pelvis through the lymphatics, constipation favors this and if there is interference with the outflow of urine, pyelitis is almost certain to develop

68 **Thyroid Disease in Pregnant Women**—Rübsamen states that he found that 34 2 per cent of 718 women in the maternity at Berne had goiter, that is 246 while at Dresden during the same period one year there were only 0 29 per cent He discusses this material from various standpoints and also enlargement of the thyroid in the new born—In the nine cases of congenital goiter the mothers all had go In several cases temporary enlargement of the ge d in the newly born after difficult delivery

71 **Eclampsia**—Persson presents
sustain his theory that the ecla
peral paresis in cows are both d
retention of the substances which
ment of the fetus When the e
which has been passing thro
diverted to the breasts, and un

nourish the child find free outlet here, they accumulate and may have a poisonous action The resulting disturbances are liable to develop whenever there is a disproportion between the supply of nourishing substances for the fetus and the capacity of the fetus to use them or, after delivery, incomplete elimination of the substances through the mammary glands Treatment therefore should be to stimulate the production of milk and its outflow This he has done by milking the breasts, massaging them and applying suction hyperemia by Bier's method This is especially necessary in puerperal eclampsia The aim is merely to render easier the normal physiologic function of the maternal organism following delivery Anything that increases the viscosity of the blood should be strictly avoided, especially saline, while potassium iodid by rendering the blood more fluid has a very favorable action, so much so that he regards potassium iodid as almost a specific against eclampsia. He reports several cases in which headache, restlessness and other symptoms with pregnancy kidney warned of impending danger which he then warded off by potassium iodid His views explain the benefit derived from operations on the breasts in treatment of eclampsia, while they show that even better results are possible by merely stimulating the natural function

Berliner klinische Wochenschrift

November 11 XLIX No 46 pp 2161 2204

74 *Metastatic Superficial Cancers (Zur Klinik und Pathologie des metastatischen Krebses der Haut im bes des Hautnervenapparates) M Askanazy
75 *Differential Diagnosis of Perforating Cancerous Gastric Ulcer H Strauss.
76 Severe Cerebral Symptoms in the Tuberculous Without Anatomic Findings E Querner
77 Threshold Percussion of the Heart (Das Individualisieren der Perkussionsintensität bei der Schwellenwertsperkussion —Goldscheider—des Herzens.) E Mosler
78 *Phenolsulphonephthalein Test of Kidney Functioning J Vogel
79 *Experimental Roentgenotherapy of Tuberculous Peritonitis E Falk
80 Action of Quinin on the Cornea (Wirkung der China Alkaloide auf die Cornea) J Morgenroth and S Ginsberg
81 Treatment of Extra Uterine Pregnancy E Runge

November 18 No 47 pp 2205 2252

82 Distribution of Paratyphoid Bacilli (Paratyphus und paratyphusähnliche Bakterien mit bes Berücksichtigung ihrer Verbreitung in der Aussenwelt und ihrer Beziehungen zu Mensch und Tier) Weber and L. Haendel
83 Inoculation Against Typhoid (Aktive Typhusschutzimpfung) G Bessau
84 *Inoculation Against Tuberculosis (Heil und Schutzimpfung der menschlichen Tuberkulose) F F Friedmann
85 Rupture of Bronchi During Compression of the Chest S Schönberg
86 Paralysis of the Vocal Cords (Habituelle Stimmbandlähmungen) H Gutzmann
87 Normal Pregnancy and Childbirth with Persisting Urogenital Sinus N J A F Boerma
88 Estimation of Capacity of Heart (Verwendung der Recklinghausenschen Gleichung zur Bestimmung der relativen Grösse des Sekundenvolumens und der relativen Inhaltszunahme) R Kleissel Commenced in No 45
89 Test for Sugar Content of Blood with Minute Amounts. (Zur Bestimmung des Blutzuckers) O Kraus and M Adler

74 **Metastatic Cancers of the Skin.**—Askanazy reports a case which he thinks is unique the patient was a woman of 45, who six months after removal of a cancer of the breast developed numerous cancerous lumps in the skin involving nerve tissue Each time the patient was able to foretell the development of a lump by a peculiar sensation in the skin She located the pain exactly and within twenty four hours a new hard nodule had developed on the point about as large as a nut and not varying in size or consistency afterward The nodules were most numerous on the trunk and scalp and were identical in structure with the primary tumor

75 **Differentiation of Gastric Cancer**—Strauss gives the technical points useful for roentgenoscopic differentiation of ordinary gastric ulcer and a cancerous penetrating ulcer They both require operative treatment but the discovery of metastases in case of cancer may be a contra indication to an operation

77 **Phenolsulphonephthalein Test of Kidney Functioning**—Vogel joins in the chorus of commendation of Rowntree and Geraghty's method of estimating the functional capacity of the kidney (The technic was described in The Journal, Sept 2, 1911, p 811)

78 **Roentgenotherapy of Tuberculous Peritonitis**—Falk's experimental research has demonstrated that exposure to the Roentgen rays is a powerfully effectual adjuvant to operative treatment of peritoneal tuberculosis He is convinced that it would much enhance the benefit from a laparotomy in clinical cases

84 **Inoculation to Prevent and Cure Tuberculosis.**—Friedmann's communication, read at the Berlin Medical Society, November 6, was summarized in the Berlin Letter in The Journal, December 7, p 2081 Friedmann states that the remedy he is using is made from a strain of tubercle bacilli which have naturally very little virulence and which have been bred to practical avirulence for man It has been applied to date (November 18) in 1,182 cases of tuberculosis of all kinds, and a single intramuscular injection has been given as a prophylactic measure to 335 children from one hour to 3 years old In 90 per cent of the children a preceding skin tuberculin test had elicited a positive response. Many times the dose suitable for human beings was injected into guinea pigs without their showing the least ill effects or intolerance When killed years later they were found entirely healthy The avirulent bacilli had been totally absorbed and the animals were immunized thereby to a certain extent The immunization thus induced was unable to resist severe artificial infection, but the animals survived on an average 303 days while the untreated controls lived only 110 days The conditions of infection in man are never so menacing as in the artificial laboratory infection, and the outlook, he thinks, seems promising for permanent immunization by this means He states further that the continuous thriving to date of the inoculated children testifies to the harmlessness of the method He cited Bier, Schleich, Karfunkel and eighteen other physicians who have sent him tuberculous patients to be treated, and some of them regard the method as of great promise [In 1904 Friedmann published an account of his efforts to immunize animals against tuberculosis by inoculation with tubercle bacilli from cold blooded animals, supposedly avirulent for other species His "turtle bacilli" preparations were also applied in the clinic, but clinicians soon abandoned this treatment on account of the abscesses that developed at the point of injection An account of his work in this line was summarized in The Journal, 1904, xlii, 136, and xliii, 1909 Orth reviewed in *Virchows Archiv*, 1908, cxc, 1, the entire history to date of the method of treating tuberculosis by inoculation with supposedly avirulent tubercle bacilli In the discussion that followed Friedmann's communication, Karfunkel, Schleich and K. Küster reported surprising benefit in all their cases and a cure in many, while some of the others he had cited were much less enthusiastic Blaschko reported abscesses at the point of injection and the death of two patients Citron remarked that Friedmann had not yet entered into details in regard to his work but to date had announced only the general principles on which it is based He warned that as long as we are ignorant of means to control the virulence of bacteria, at any moment an avirulent virus may develop virulence in our hands and we be unable to prevent it He cited Pasteur's experience in this line, the vaccination against chicken cholera which at first had proved so successful and seemed so promising, suddenly started severe epidemics as, for some unknown reason, the previously avirulent virus had become virulent For these reasons, physicians have shrunk from applying this principle in therapeutics Citron added that while there may not be so much cause for concern in the treatment by this means of severe tuberculous processes, yet that there is every reason to refrain from inoculating clinically healthy individuals with a living virus when they merely display a positive reaction to the tuberculin skin test He urges greater caution for the future, at least until Friedmann has made it clear to the medical world what his inoculation material actually is In his previous research Friedmann announced that he was using tubercle bacilli from cold blooded animals—turtles—but he has not informed the world as yet whether his present remedy is from this source or not He describes it merely as a living avirulent bacteria material of tuberculous nature (*Bakterienmaterial tuberkulöser Art*) F Klemperer recapitulated the history of previous attempts to make a tuberculin for clinical use from bovine and turtle tubercle bacilli, stating that the turtle bacilli preparation had to

be dropped as its injection caused local suppuration at the point of injection Goldscheider expressed regret that the reports on treatment with Friedmann's remedy were not accompanied by exact details, the mere general impression of subsidence of night sweats, return of appetite, etc, are not sufficiently scientifically accurate to serve as the base for estimation of the condition before and after treatment He urged the society not to go on record as tacitly approving the inoculation with living bacilli of such large numbers of young children merely on the ground of a positive tuberculin skin reaction The discussion on Friedmann's communication at the Berliner med Gesellschaft was announced to continue at the next meeting]

Deutsche medizinische Wochenschrift, Berlin

November 7 XXXVIII, No 45, pp 2105-2152

90 *Salt and Water in the Diet (Rolle des Kochsalzes und Wassers in der Ernährung) H Strauss
91 *Treatment of Arteriosclerosis A Strubell
92 Treatment of Articular Rheumatism P Junghans
93 Experience in Aseptic and Antiseptic Treatment of Wounds P Sick
94 *Tuberculosis of Long Bones (Herdförmige Tuberkulose der Extremitätenknochen) W Böcker
95 Bacteriology of Psoriasis A Menzer
96 Copper Salts in Treatment of Superficial Cancer (Epitheliom behandlung mit Kupfersalzen—Kupferlezithin) A Strauss
97 Toxicity of Alien Albumin (Giftwirkung arteigener Eiweissstoffe) A Stühmer
98 *Impressions of America (Nach dem Washingtoner Kongress) A. Pröbsting

90 **Salt and Water in Dietetics**—Strauss states in the course of this general review of the importance of salt as a link in the chain of factors leading to dropsy, that abstention from salt benefits only when the retention of salt is due to parenchymatous nephritis When the dropsy is of cardiac origin, the intake of salt has no influence on it, nor on gastric secretion, that is, in his experience he was never able to bring about a normal secretion of gastric juice in cases of anacidity, even by the most copious intake of salt On the other hand, he has had cases in which large amounts of extremely acid stomach content were vomited repeatedly while the urine for weeks contained only traces of salt—a sign of the salt starvation of the body In some cases this salt starvation from incessant vomiting of the hydrochloric acid in the stomach, with extreme motor insufficiency, entailed severe prostration and spasmophilia, subsiding only when large amounts of physiologic salt solution were administered by subcutaneous or rectal injection The "salt fever" in young children is due more to the sodium *ion*, he thinks, than to the chlorin *ion* In heart disease, abstention from salt is useful only as the patients are less thirsty and thus are not tempted to drink so much It has been his impression that a tendency to uremia is more marked in nephritis without dropsy than in the dropsy cases the retained fluids dilute the retained poisons and thus are beneficial In diabetes insipidus, also, restriction of the salt intake is advantageous as it reduces the thirst and thus aids in combating the tendency to polyuria, and is useful also in polyuria from any cause and in the treatment of obesity He agrees with Bunge that people take too much salt as a rule, but the harm comes from the resulting thirst which leads them to drink beverages which are not always conducive to health

91 **Treatment of Arteriosclerosis.**—Strubell reiterates that in treatment of arteriosclerosis we cannot hope for more than slight improvement in a few of the symptoms but that this is often supremely *important* Chief of all is *the encouraging* influence of the physician, combating the depression and frequent tendency to suicide Strubell does not approve of too stringent restrictions, age brings so many of itself that the arteriosclerosis need not add many more The most important point is to ward off impending arteriosclerosis by hygienic living and diet, exercise, treatment of incipient tendency to kidney disease or gout, and avoidance of excesses of all kinds with special care to prevent congestion in the abdomen Plethora in the abdomen leads to overfunctioning of the vessels connected with the internal organs and thus brings undue strain on these vessels with resulting sclerosis He thinks that much can be done in this way to ward off arteriosclerosis which otherwise is invited by the hurry and stress of modern life Among the sedative measures he has found useful in arteriosclerosis are electric baths with the alternating current. Carbonated baths might be useful if the technic were perfected, but this is very faulty to date, he says, relating instances of direct harm from the carbonated baths now in vogue (The importance of diet in warding off impending arteriosclerosis was emphasized in a recent editorial, p 1976)

94 **Tuberculous Foci in Long Bones.**—Böcker reports three cases to sustain his view that on the least suspicion of involvement of the joint in a focus in a long bone near a joint operative measures are contra indicated as a rule He advocates the clearing out of the process only when the focus is certainly entirely outside of the capsule and there is no danger of infecting the joint if the focus is opened up His cases show that a sequester may become encapsulated and the focus heal without further disturbance The gait later in one such case was interfered with by a sequester as large as a cherry ensconced in the trochanter like the kernel of a nut, it had caused no trouble until after a fall on the hip The patient was a boy of 9 and the symptoms then were assumed to be a *flaring up again of an old healed process in the hip joint* When the sequester was shown by roentgenoscopy it lay so accessible that it was removed as a preliminary measure to the contemplated operation on the hip joint, but it proved to have been responsible for all the disturbance Its removal was followed by a *permanent disappearance of all symptoms* The nest of the sequester communicated with the joint, but its prompt removal after the trauma, before it had set up trouble *inside the joint, arrested all further disturbance* The cavity left by its removal soon grew up with bone tissue. In the second case the clinical tests seemed to indicate that there was no connection between the focus and the joint but the operation proved that there was and infection followed In a third case the suspicion of a connection deterred him from operating but *the process healed permanently under conservative measures* and time proved that the joint was intact. Whatever treatment is applied, he adds, potassium iodid is a valuable adjuvant Bier recently demonstrated this by three patients cured by stasis hyperemia and potassium iodid internally in an unusually short time and with none of the complications so often observed under prolonged hyperemia treatment

98 **Impressions of America.**—A rich crop of letters is sprouting every week in our exchanges written by members of the large party of physicians who toured the United States at the time of the recent International Hygiene Congress Pröbsting here states that people in Germany can form absolutely no conception of the public libraries in America or of the park systems in the large cities especially in Chicago Personal hygiene is more highly developed than in Germany, but public hygiene lags far behind He deplores that the rich in Germany do not seem to feel that *richesse oblige* as well as *noblesse oblige*, the fact that so many charitable institutions in America are endowed by private means being to him the most wonderful thing about the medical institutions he visited He adds that all the party found stimulation in the congress addresses and discussions and "the small exhibition" connected with it Germany has much yet to learn, he remarks, in regard to the hygiene of children He says of the Chicago stock yards that here the division of labor—specialization—is seen in its extremest development, man is merely a machine To the thinking observer it seemed actually a degradation of the Human

Mitteilungen aus den Grenzgebieten der Med. und Chir., Jena

XXV No 3 pp 403-598 Last indexed October 26 p 1585

99 The Cammidge Reaction No Criterion of Pancreas Disease J Mayesima
100 Experimental Research on Collateral Venous Circulation in the Kidney (Zur Bildung venöser Kollateralbahnen in der Niere) K. Isobe
101 Persisting Choked Disk with Otitic Sinus Thrombosis (Eine praktisch wichtige otogene Hirnkomplikation) S Auerbach and F Alexander
102 Eunuchoidism with Diabetes Insipidus Two Cases F Ebstein
103 Successful Operation for Bilateral Cysts in Cerebellum (Fall von doppelseitigen mit Erfolg operierten Kleinhirncysten) S Auerbach and E Grossmann
104 *Peptic Duodenal Ulcer G B Gruber
105 *Resection of Middle Portion of Sagging Stomach (Behandlung der Gastroptose durch keilförmige Resektion in der Pars media des Magens.) E. Schlesinger

106 Case of Mikulicz Disease (Fall von symmetrischer Schwellung der Speichel und Tränendrüsen nebst Beteiligung des lymphatischen Apparates und der Haut.) E Plate and F Lewandowsky.
107 *Pulmonary Abscess and Bronchiectasia from Surgical Standpoint. F Külbs.
108 *Favorable Influence of Intercurrent Infectious Disease on Chronic Disease. D Gerhardt.
109 Histologic Research on Local Eosinophilia in Surgical Intestinal Disease. J Oehler.

104. **Peptic Duodenal Ulcer.**—Gruber found peptic ulceration in 7.7 per cent. of 5,884 adult cadavers, 1.5 per cent. were in the duodenum, 6.7 per cent. in the stomach, 0.1 per cent. in the esophagus. He summarizes the clinical history of the 140 cases of peptic duodenal trouble; in 17 per cent. perforation was the cause of death. He calls attention anew to the connection of peptic ulcer with circulatory disturbances. In comparatively few of the cases had the duodenal ulcer been diagnosed during life. In 75 per cent. it had been overshadowed by some other affection. His experience shows that latent peptic ulcer occurs comparatively frequently in persons with arteriosclerosis, and may first manifest its presence by a severe open or prolonged occult hemorrhage. Especially in the elderly the possibility of this should not be forgotten.

105. **Operative Treatment of Sagging Stomach.**—Schlesinger gives an illustrated description of cases in which all internal measures had failed to relieve and he restored approximately normal conditions by cutting out the middle third of the stomach, uniting the stumps directly after this wedge-shaped resection, striving to have the stumps of about equal diameter.

107. **Operative Treatment of Pulmonary Processes.**—Külbs states that fourteen patients were cured of the twenty-four operated on for putrid abscesses of the lungs and three were much improved, seven died. He comments on the rapid subsidence of all symptoms after the operation and compares his experience with the 600 similar cases on record with a mortality of 17.5 per cent.

108. **Favorable Influence of Intercurrent Infectious Disease on Chronic Affections.**—Gerhardt reports six cases of this kind but the benefit was only transient in all. In the first a woman of 72 with intense trigeminal neuralgia had no pain in this region during the course of croupous pneumonia; pneumonia seemed also to abolish the pain of bilateral sciatica from a tumor in the sacrum in another case. In a third case of tuberculous ascites the diuresis became remarkable during an intercurrent pneumonia and the ascites disappeared for the time being. In the other cases the symptoms of pressure on the brain from a tumor ceased during an attack of measles, an acute psychosis subsided temporarily during erysipelas and a subchronic articular rheumatism caused no symptoms during an attack of follicular tonsillitis. In all the cases the pains kept off for a few days into convalescence; in none was the consciousness impaired. In connection with these experiences he mentions Bloch's recent report of a case in which a parasitic affection healed when another part of the body had been inoculated with another parasite (*Achorion quinckeanum*).

Münchener medizinische Wochenschrift

November 5, LIX, No. 4, pp. 2433-2488

110 Contraction of Muscle and Swelling of Colloid. (Muskelkontraktion und Kolloidquellung.) J Grober.
111 *Nephrectomy for Kidney Tuberculosis. Sixty Cases. (Dauerresultate von 60 Nephrektomien.) I Suter.
112 *Septic Rheumatoid Disease. T Schürer.
113 Injury of Eyes During Eclipse. (Augenbeschädigung durch die Sonnenfinsternis am 17. April 1912.) J Hoppe.
114 Local Application of Heat by Steam. (Lokale Wärmebehandlung durch Dampf.) H v Baeyer.
115 *Prevention and Treatment of Ankylosis of Joints. (Gelenkversteifungen.) K Wahl.
116 Electric Treatment of Postoperative Paralysis of the Intestines. W Pettenkofer.
117 Operative Cure of Myelitis from Compression by Tuberculous Process in the Spine. (Fall von operativ geheilter spondylitischer Kompressionsmyelitis.) A Mendler.
118 *Treatment of Furunculosis and Carbuncles. A Schüle and Heddäus.
119 *Typhoid Bacillus Carriers. (Aus der amtsärztlichen Tätigkeit.) B Göhring.
120 Technic for Control of Roentgen Therapy. (Beaufsichtigung der Röntgentherapie seitens der Vorstände an Kliniken, Spitälern und Laboratorien.) R Kienböck.
121 The Epiphanin Reaction. (Zur Weichardtschen Epiphaninreaktion.) Korff-Petersen and H Brinkmann.

111. **Nephrectomy for Kidney Tuberculosis.**—Suter reports eighteen women cured by nephrectomy and ten men, with seven women and nineteen men materially improved. Five of the women passed through a pregnancy later. Only one of the five patients who have died since the nephrectomy succumbed to involvement of the lungs. The fact must not be forgotten that after the nephrectomy the patients are still tuberculous, and consequently that the general measures should not be omitted. He urges the general practitioner to pay special attention to the possibility of kidney tuberculosis in all obscure and spontaneous catarrhal affections of the bladder or kidney trouble. This is the only means to enable the recognition of the local tuberculous process in the kidney in the stage in which the entire disease focus can be removed. He cites two cases out of a wide experience in which the operation was refused, and although the kidney process apparently healed, yet complications developed in the other kidney or testicle with other serious features, confirming the dangers of leaving a tuberculous kidney in the body.

112. **Septic Rheumatoid Disease.**—Schürer found the *Streptococcus viridans* in three cases of what was apparently acute articular rheumatism, only that no benefit was derived from salicylic medication. He ascribes great importance to tonsillectomy in treatment of septic articular rheumatism.

115. **Treatment of Ankylosis of Joints.**—Wahl lays special stress on the prevention of ankylosis after phlegmonous processes involving the joints. He describes and illustrates a number of mechanical appliances which permit extension or rotation of the joints with other features to cure and prevent stiffness.

118. **Treatment of Furunculosis and Carbuncles.**—Schüle advises cauterizing the center of an incipient boil as the best measure for aborting it. He applies a little local anesthesia before the actual cautery. The first boil is generally too far advanced before it is seen but the following one treated by prompt cauterization in its early stage is aborted and the crop is thus destroyed.

Heddäus emphasizes anew the great value of a deep circular incision around a carbuncle down to the muscle or periosteum. This localizes the trouble and the result in his cases has been striking. He here relates a case in a diabetic in which the benefit was noticeable although the patient succumbed to the pre-existing complications.

119. **Prophylaxis of Epidemics.**—Göhring reports another instance of the way in which it is possible to nip a typhoid epidemic in the bud by search for bacillus carriers in the environment and training the carriers in the principles of prophylactic care. He also calls attention to the necessity for greater importance being paid to the negative findings on bacteriologic examination. In two recent cases the diagnosis of typhoid seemed certain except for the absence of typhoid bacilli from the stools and necropsy revealed miliary tuberculosis.

Therapeutische Monatshefte, Berlin

November, XXVI, No. 11, pp. 769-840

122 *Protection of the Peritoneum Against Operative Infection. (Ueber Peritonealschutz.) O Hoehne.
123 Injections of Calcium-Gelatin. A. Müller and I Saxl.
124 Neosalvarsan. W Heuck.
125 Hypophysis Extract in Obstetrics and Gynecology. J Hirsch.
126 Study of Ergot. (Zur Kenntnis der Wirkung des p-Oxyphenyläthylamins.) M Guggenheim.
127 *Quackery and Nostrums from the Legislative Point of View. (Die Bekämpfung der Kurpfuscherei und des Geheimmittelschwindels auf dem Boden landesgesetzlicher Verordnungen.) A Springfeld.
128 *Aspirin and Acetylsalicylic Acid. H Linke.
129 *Reform in Advertising Medicinal Articles. (Wünsche zur Reform des Arzneivertriebes.) W Heubner. (Von der Arzneimittelkommission des D. K. für Inn. Med.)

122. **Protection of the Peritoneum.**—Hoehne has been much pleased with the results of the injection of 30 c.c. of a 1 per cent. camphorated oil before operations to induce a local protecting reaction on the part of the peritoneum as a barrier against general infection in abdominal operations in which asepsis cannot be counted on. In his experience with 234 "unclean" abdominal operations, including 113 uterine cancer cases, there were only twenty deaths and for only two of these was a suppurative peritonitis responsible. In both of

these cases the connective tissue in the small pelvis was probably the source of the peritonitis after removal of the uterine cancer In the eighteen other fatal cases there was no peritonitis and necropsy revealed the desired reaction to the camphorated oil It permits the abdomen to be sutured, and in the 350 cases in which he has applied the ante operation oil treatment there was no sign of injury from it in any instance Recent reexamination of 150 patients showed the absence of adhesions or of any signs of ileus In case of much infection it might be wise to follow the operation with a second smaller injection of oil He has been applying the method for three and one half years and states that his experience is confirming more and more that the reaction localizes the infection and destroys the germs in the abdominal cavity by mobilizing the exudation forces, the strength of which depends on the capacity of the peritoneum for reaction the choice of the irritating substance and the duration of the irritation The protection is confined to the germs in the abdominal cavity and does not exclude infection from the soft parts He does not think that injections after the operation answer the purpose at all, as the reaction comes too late but it might prove a useful adjuvant

127 **Quackery and Nostrums**—Springfeld reviews the legislation on these subjects in Germany and the history of the measures that have been proposed against them, especially the agitation for a central standardizing office for new remedies He states that if the nostrum business could be eradicated millions would be saved to the people sufficient to finance all the wished for reforms to stamp out tuberculosis By checking the flood of quackery also more human lives would be saved than by the national social insurance

128 **Aspirin and Acetylsalicylic Acid**—Linke reports that those who have found that non proprietary brands of acetylsalicylic acid contain free salicylic acid, while the proprietary brand "aspirin" is free from it, obtained their results through the employment of faulty chemical methods Linke states that those interested in aspirin admit that, depending on the peculiarity of the patient, both 'aspirin" and acetylsalicylic acid produce gastric disturbances which disturbances are not uncommon according to Linke's own experiences As in acknowledgment of this it is reported that the Farbenfabriken are attempting to introduce a substitute for "aspirin which is said to be especially useful where aspirin is not well tolerated Linke has found acetylsalicylic acid von Heyden to be the equal of aspirin both chemically and therapeutically and concludes with the assertion that a good acetylsalicylic acid under the same conditions and with the same patient acts as promptly and efficiently as aspirin—which is a good grade of acetylsalicylic acid and nothing more—and that both in a given case produce equal gastric disturbances (See The Journal, Nov 2, 1912, p 1642

129 **Reform in Advertising Medicinal Articles**—The committee appointed by the German Congress for Internal Medicine—which is entitled to be called the German Council on Pharmacy and Chemistry—announces that it has recently elected six consulting members in addition to the six regular members The regular members are Penzoldt Gottlieb W Heubner, G Klemperer, A Schmidt and Spatz nearly all editors as well as internists The consulting members are W A Puckner as representative of the Council on Pharmacy and Chemistry of the American Medical Association Mannich of Gottingen, as representative of scientific pharmacy Dippe of Leipsic as representative of the German Aerztevereinsbund and Salzmann of Berlin, as representative of the German Apothekerverein O Heubner of Berlin as adviser in pediatric and Bettmann of Heidelberg in dermatologic matters In addition F Fischer Thoms and His are a special advising council The commission has installed its office at Nikolausberger Weg 23, Göttingen in charge of Dr O Loeb All questions and communications should be sent to this office The commission is soon to publish a second list to contain the approved articles The list B the previously negative list, will follow later In addition to the publication of these lists, the organized medical press has agreed to submit all advertisements to critical inspection before accepting them, so that a number of advertising abuses will be eliminated at once It is hoped by the committee that this self regulation inside the profession, will gradually lead to a reduction in the grossest abuses Further details in regard to what is practically the analogue in Germany of our own Council on Pharmacy and Chemistry are given in the current Berlin Letter December 7 p 2081

Wiener klinische Wochenschrift, Vienna

November 7 XXV No 45 pp 1773 1816

130 Psychogenic Disturbances in Children (Ueber den Mechanismus psychogener Erkrankungen bei Kindern) F Hamburger
131 Protozoa in Chronic Pemphigus. B Lipschütz
132 *Tetany and Osteomalacia (Zur Pathogenese der kalzipriven Osteopathien) J Bauer
133 Myomas and Primary Sarcomas of the Stomach A Löwit
134 The Campaign Against Tuberculosis (Vorschläge zur Bekämpfung der Tuberkulose) M Winter
135 The Municipal Pharmacies in Italy P Martell

132 **Tetany and Osteomalacia**—Bauer reports a case of tremor followed by tetany occurring in the course of nephritis He thinks the irritation of the nervous system by the uremic poison and its action further on the parathyroids explain the symptoms observed In another case the tetany developed during osteomalacia in a woman of 27 The osteomalacia was independent of a pregnancy and was not influenced in any way by two following pregnancies but with the tetany it passed into a latent stage with exacerbations later He discusses the relations between osteomalacia, tetany and rachitis The case is especially interesting on account of the remarkable benefit from epinephrin treatment The causal connection of the tetany and osteomalacia was sustained by the simultaneous appearance and subsidence of the symptoms of both again and again Three times the symptoms of both entirely subsided under the epinephrin treatment and three times they returned again together indicating renewed treatment

Zentralblatt fur Chirurgie, Leipsic

November 16 XXXIX No 46 pp 1569 1600

136 *Improved Technic for Gastrostomy (Neues Verfahren für die Gastrostomie und Oesophagoplastik) W Röpke

136 **Improved Technic for Gastrostomy**—Röpke has applied the technic recently proposed by Jianu for making a tube leading into the stomach utilizing for the purpose a long narrow flap from the wall of the greater curvature of the stomach Röpke modified Jianu's technic a little and states that the method avoids all the disadvantages of other technics while retaining their good points The pedunculated flap is cut from the lower part of the greater curvature up toward the fundus The tube thus formed is brought out through the pectoral muscle below the left clavicle which effectually prevents seeping of the stomach content

Zentralblatt für Gynakologie, Leipsic

November 16 XXXVI No 46 pp 1529 1568

137 The Streptococci in the Vagina of Parturients (Bedeutung der Streptokokkenbefunde im Vaginalsekret Kreissender) K W Jötten
138 *Ileus During Pregnancy or the Puerperium P C T Van der Hoeven
139 Hypophysis Extract in Treatment of Amenorrhea R Hofstätter

138 **Ileus During Pregnancy**—Van der Hoeven has compiled from the literature ninety four cases of this kind which he tabulates the records showing that absolutely no cause for the ileus could be found in from fifteen to twenty of the cases even at necropsy He then offers an explanation for the development of the ileus as he encountered it in a few cases The gravid uterus in the open abdominal cavity does not press on the intestines enough to obstruct them but it is possible that there is pressure on the intestines in the pelvic inlet When the lower part of the uterus is pushed down into the pelvic inlet from above or dragged down from below the rectum may be compressed at this point by the enlarging uterus If the vagina is elastic it yields when the pregnant uterus grows up out of the same pelvis which occurs about the third or fourth month but if it is not elastic the vagina pu [illegible] rus and holds it down in the pelvic inlet [illegible] are readily induced which lead to ileus A [illegible] rect the condition and the cau

tion In the cases on record he has found five in which conditions seemed to indicate this explanation of the ileus These conditions may also be responsible for the tendency to constipation in pregnant women

Gazzetta degli Ospedali e delle Cliniche, Milan

November 5, XXXIII No 133, pp 1393 1400

140 *Italy s Freedom from Cholera This Year (Perche quest anno non abbiamo avuto il colera?) E Bertarelli
141 Efficacy of Milk of Thyroidectomized Goats in Exophthalmic Goiter Two Cases. (Latte steroidato nel morbo di Basedow) A Cantieri

140 **Italy's Freedom from Cholera This Year**—Bertarelli confesses that, with many others, he was sure that 1912 would witness the continuation of last year's epidemic of cholera in Italy which was responsible for 7,000 deaths, according to the official statistics But the country has been free from cholera up to November, and this confirms, he says, the comparative harmlessness of cholera germ carriers and the efficacy of the prophylactic measures applied, although they were far from thorough in some places They served, however, to educate the public in personal hygiene, and to show how with a little good will and common sense it is possible to ward off cholera He remarks that germ carriers are not a "new" danger, they must have existed always although they were not discovered until recently Theoretically epidemics should spring up in the track of the hordes of germ carrying globe trotters, and the fact that this does not occur confirms anew the extreme paucity of our knowledge in regard to the biology, etc , of cholera germs.

Riforma Medica, Naples

November 2 XXVIII No 44, pp 1205 1232

142 The Venous Pulse in Fatigue (Il polso venoso nell uomo affaticato) L Ferrannini and R. Scalia Commenced in No 43

Semana Medica, Buenos Aires

October 17, XIX, No 42 pp 753 808

143 Spontaneous and Criminal Abortion from Clinical Standpoint F Zarate
144 Influence of Spleen on Gastric Secretion (Influencia del bazo en la formacion de los fermentos gastricos I) F L Soler and L F Madero
145 Eruption from Iodid Poisoning (Penfigo yodico) P Ghiso

Hospitalstidende, Copenhagen

November 6, LV No 45, pp 1293 1328

146 *Laceration of the Dura Mater of the Child During Delivery (Om Bristningen i Dura mater opstaaede hos nyfødte under Fødslen) L Meyer and E Hauch

146 **Laceration of the Dura Mater During Birth**—Meyer and Hauch have made a special study of this subject since Benecke recently called attention to the importance of laceration of the tentorium in the pathology of the new born In order to study this laceration the skull has to be opened with special precautions, as they show with several illustrations Examination of the skulls of sixty four infants born dead or dying soon after birth at the Copenhagen maternity, showed rupture of the dura in twenty eight cases The laceration was the cause of death in only twelve of the cases, the proportion was thus 1 per cent in the total 1,200 deliveries during the six months with sixty four of the children stillborn or dying soon after birth The tentorium is very rich in blood vessels and the outcome depends on the extent of the laceration and size of the vessel involved

In thirteen of the children the rupture was probably the cause of death, including six stillborn, one delivered in breech presentation and five in vertex presentation all difficult forceps cases In fifteen of the cases the laceration was without clinical significance In the seven children who were born alive with serious rupture four died almost at once, one was born spontaneously in vertex presentation four weeks before term and both tentorium and falx were completely torn with great hemorrhage Another of the children in this group was syphilitic and there was partial laceration on both sides One child was born a month before term and the longitudinal sinus was found ruptured with great hemorrhage The findings in each of the cases of fatal laceration of the dura are illustrated and the details tabulated They demonstrate that the rupture occurs during spontaneous delivery only in small, prematurely born children or macerated fetuses or fetuses which have died just before birth When rupture occurs in a well developed child there has always been some preceding difficult obstetric *manipulation or the rupture is of insignificant extent* The head of a prematurely born child may not be able to stand the strain of even a spontaneous delivery In a recent case a child was being delivered by cesarean section and just as the chin and mouth were passing through the opening in the uterus a violent contraction occurred, compressing the head for a few seconds, but releasing it again at once The child was small (2 150 gm), but at term It died ten hours later and the *tentorium was found torn on both sides* with considerable hemorrhage During the period in question forceps were applied in sixty six cases but this was a simple matter in all but twenty In this latter group the forceps got a good hold in twelve cases and no lacerations occurred, while in the eight cases in which the application of the forceps met with some difficulty there was rupture in every instance Pressure on the head from the front backward seems to be the most dangerous in this respect The falx is not so rich in vessels as the tentorium and consequently laceration here is less serious (A previous communication on this subject was summarized in The Journal, June 15, 1912, p 1888)

Ugeskrift for Læger, Copenhagen

October 31 LXXIV No 44 pp 1601 1632

147 Digitalis Preparations (Digitalisstoffer Digitalispræparater frisk Digitalisinfus) A Olgaard
148 Three Cases of Sclerosis in Patches in One Family (3 Tilfælde af Sclerose en plaques) E Clausen

November 7 No 45 pp 1633 1668

149 *Nervous Disturbances from Cervical Ribs (Nervelidelser som Folge af Halsribben) K H Krabbe

149 **Nervous Disturbances from Cervical Ribs**—Krabbe reports six cases which emphasize anew the variability and severity of the clinical disturbances that may be induced by supernumerary ribs in the neck In two cases the functioning of the arm was interfered with and there was pronounced scoliosis, the latter is a frequent finding with cervical ribs Another patient was a man whose left arm and leg had always shown some atrophy At the age of 30 the left arm developed gangrene, compelling amputation before the cervical ribs—the cause of the vascular disturbance—had been discovered The symptoms suggested syringomyelia in some respects In the other cases the trouble was in the peripheral nerves, in one case the course was so acute and painless that poliomyelitis was suggested while in the others the trouble came on gradually and the pain became so intense that life was unbearable The diagnosis in one case had been a spinal tumor, roentgenoscopy was negative and no benefit was derived from drugs and electricity After seven months of various measures, the patient, a girl of 22, was presented at a meeting of neurologists and the diagnosis discussed, some inclining to accept a spinal tumor, others syringomyelia others Klumpke's neuritis or a neuritis with functional disturbances The first sign of trouble had been noticed at the age of 12 but the pains did not develop until five years later The possibility of cervical ribs was mentioned but discarded owing to the negative Roentgen ray findings On assumption of syringomyelia, roentgenotherapy was applied but proved futile as also all medication After six months of agonizing pain the patient insisted on an operation of some kind and roentgenoscopy then with special regard to the neck revealed the cervical ribs and prompt recovery followed the operation for their removal One lesson taught by the martyrdom of this patient is that roentgenologists seldom *think of the possibility of cervical ribs* in this case the anomaly was at the seventh cervical vertebra the rib being 3 cm long, too small to be palpated and not evident on roentgenoscopy until specially sought for A special feature of the case is that a sister of this patient also had cervical ribs causing trouble and three brothers had a slight tendency thereto while the seven other children in the family were free from it Krabbe's six patients were between 16 and 34 and the cervical ribs had caused no disturbances until from one to ten years previous.

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PULMONARY TUBERCULOSIS AS AN OBSTETRIC COMPLICATION *

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To obtain an approximate idea of the frequency of tuberculosis during pregnancy we assume in the absence of data that it is about the same as among women of the child-bearing age From 25 to 29 per cent of all women in this age period die of tuberculosis and the general death-rate for the period is 8 per thousand Consequently the yearly death-rate from tuberculosis for women between the ages of 15 and 50 is from 2 to 2 3 per thousand Now, assuming an average duration of the disease of from five to eight years this would give a frequency between 1 and 2 per cent This would indicate that every year there are in the United States between 22,000 and 44,000 gravidæ with active tuberculosis in one of the three stages

Probably if all latent cases were included the number would be greater I omit consideration of such cases that do not become active during pregnancy Until there is more uniformity in methods of diagnosis and classification it is impossible to secure data from different clinics and institutions which can be used in computing the extent of the disease The adoption of the suggestion of Flick of Philadelphia, made at the recent International Congress on Tuberculosis in Rome, would help to secure more reliable data He proposes a standardization of the symptoms of tuberculosis and the adoption of an international history sheet The introduction of such a uniform system of examination and records would bring uniformity into the statistics which now show a variation of from 1 to 50 per cent in the frequency of tuberculosis in different institutions

The management of this complication depends on the effect of tuberculosis on the egg and on the pregnancy, and also on the effect of pregnancy, labor and the puerperium on the course of the tuberculosis Considering first, the effect of tuberculosis on the fetus, it must be admitted that fertilization and nidation may occur in a tuberculous tube or uterus This eventuality is, however very rare, but the infection of the decidua, placenta and chorion has been shown by a number of observations to occur not infrequently When this happens, the blood of the fetus may contain tubercle bacilli Only further observation can determine how often this occurs Also infection through the spermatic fluid may occur

The discovery of tuberculosis in the first two months of child life, however, is rare Practically all observers agree that tuberculosis when it is found in infants is the result of infection after birth It may be that fetal infection is easily overcome during intra-uterine life A marked immunity at birth, however, does not exist Some predisposition to the disease may occur The nature of this has been much discussed, but without result

EFFECT ON PREGNANCY

The effect of tuberculosis on the course of pregnancy is slight In some cases in which there is considerable involvement of the placenta or decidua, abortion may occur

The effect of pregnancy on the course of the tuberculosis differs much in individual cases, depending on the progress of the disease, the surroundings of the patient and the existence of complications, such as foreign infections and toxemias If the patient gets through the first three months well there is often an improvement in her condition She may increase in weight and in strength and come to labor in fair condition This favorable course is more common in tuberculosis in the first stage Sometimes it is found in the second stage of the disease In both the first and the second stages the patient may begin to fail in the last three months Respiration becomes difficult, coughing is very disturbing, the woman becomes very weak and loses weight In the third stage the prognosis is always bad and the woman may die before labor begins

The description just given is not agreed to by all Many contend that there is always an increase in the tuberculous process during pregnancy Assuming this to be a fact, various explanations have been given to account for it A pregnant woman is not particularly susceptible to other infections The special susceptibility to tuberculosis of the lungs has been attributed to the contraction of the thorax and disturbance of respiration by the lifting of the diaphragm and venous congestion Also to the tissue changes in the lungs and air passages have been ascribed deleterious influences

To these factors which indirectly favor the development of the tuberculosis, have been added others which might directly favor the growth or increased virulence of the tubercle bacillus Among such alleged factors are changes in the number and character of the leukocytes and also of the opsonins of the blood of pregnant women Recently Hofbauer has held that there is a decrease in the lypolitic enzymes of the blood serum of pregnant women which leads to a lipemia that favors the growth of the tubercle bacilli This theory not having been confirmed more recently still he and Christofoletti and Thaler have tried to show that there is a condition of lipoid anemia — cholesteremia — that is favorable to the development of [illegible] rculosis germs This latter theory remains [illegible] or disproved Meantime we cannot adm[illegible] cl[illegible] h these workers have tried to explain, viz, that all such cases grow worse during pregnancy

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* Read in the Section on Obstetrics and Gynecology of the American Medical Association at its Sixty Third Annual Session held at Atlantic City June 1912

If the patient has passed through pregnancy in good condition, labor may be quite normal, especially when there are no pathologic conditions in the passages or passenger If she be very weak labor may be a serious strain

It is acknowledged that in the puerperium the tuberculosis generally becomes worse even in milder cases, and in bad cases the patient may succumb within a few days or a few weeks Perhaps the strain of labor breaks up old infection foci or causes injuries which complicate the situation One is reminded of the exacerbation of appendicitis in the puerperium

PROPHYLAXIS

There are two problems in prophylaxis, the prevention of pregnancy in a tuberculous woman and the prevention of infection in a pregnant woman or one liable to become pregnant The latter problem is very important and often overlooked or slighted

The chief danger of infection for the woman is from her husband A man with tuberculosis should not marry If a husband acquires tuberculosis after marriage, he should avoid infecting his wife Every consideration of reason and affection demands this course It is the duty of all who are interested in preventive medicine, not only health officers, but also the medical profession, to spread information on this subject There is nearly as much reason why a tuberculous man should not marry as why a tuberculous girl should not marry If in the married life, the husband acquires tuberculosis first, i e, before his wife, he should, if possible, undertake a sanatorium cure Even if a cure is not accomplished, he learns in the institution how to avoid infecting others and acquires the intelligent self-control necessary to the avoidance of the greatest danger

The other problem in prophylaxis is the prevention of pregnancy in a tuberculous woman Of course a girl with active tuberculosis should not marry This should be taught in all possible ways until it becomes a moral law in every civilized community The prevention of pregnancy in a tuberculous wife can be accomplished by abstinence from sexual congress by the use of measures to prevent conception and by artificial sterilization

Of course, we advise abstinence Sometimes it will be practiced, but rarely can we feel certain that it will be continued for any considerable length of time Preventive measures are generally failures in the end Hence we come to the somewhat complicated question of artificial sterilization

ARTIFICIAL STERILIZATION

It is not immoral in itself The serious objections to the induction of abortion do not apply to it The chief objection is that the patient may recover from the infection and then desire to have a child This objection is overcome by doing a temporary sterilization For nullipare or women with only one child or women who have a good chance to recover a temporary sterilization should be chosen For women who already have several children or those who have very little prospect of a permanent cure some permanent sterilization operation may at times be preferred

Whatever operation is made it is especially important that a written agreement be had with both wife and husband in order to avoid future possible legal complications

It is well known that a simple ligation of the tubes is not a reliable method of producing sterilization Neither is the incision between double ligatures sufficient It is necessary to bring the uterine end of the tubes under the peritoneum or within the broad ligament This can be done through a vaginal celiotomy and is among the simplest and safest of gynecologic operations in the absence of pregnancy, and with a patient in a fair condition Later it will be possible, if the patient recovers from her tuberculosis, to implant the distal part of the tube into the uterine portion

Several reasons may favor combining the sterilizing operation with the induction of therapeutic abortion This may be done if the pregnancy has not advanced beyond the tenth or twelfth week Schauta favors the practice and avoids injury to the large, soft and congested uterus by catching the round ligaments one at a time and bringing the isthmial portion of the tubes into the peritoneal opening After the twelfth week of pregnancy it is better to empty the uterus if abortion is necessary and to wait a few weeks before sterilizing

The two most important methods of permanent sterilization are castration and hysterectomy Bumm combines them He and others contend that removal of the ovaries will favor the healing of the tuberculosis through its tendency to cause an increase in the fat which helps the struggle against the infection Others deny that the healing of the tuberculous process is effected by such an increase of fat in the body and hold that the nervous and psychic disturbances arising from the removal of the sexual glands is an injury to the patient

Castration may sometimes be indicated as a sterilizing operation in order to stop the menstruation that may be attended with much pain or with serious loss of blood Hysterectomy would meet the same indications and alone might be preferable to castration as the organism would retain the ovarian glands whose secretion might be of value for some time The combination of the two procedures in the Bumm operation seems contrary to conservative practice and can be justified only by exceptional clinical results

Pincus' method of atmocausis or obliterating the uterine cavity by burning it out with superheated steam has not found much general favor The use of the Roentgen ray to destroy, more or less completely the sexual glands is too uncertain to promise much for the future

When both husband and wife are tuberculous, it would seem more reasonable to sterilize the husband by an operation on the vas deferens This would be equally efficient and less dangerous, as it is generally made without an anesthetic

INTERRUPTION OF PREGNANCY

If in spite of advice and care a tuberculous woman becomes pregnant or if a gravida becomes infected with tuberculosis, the first question in the management will be that of the interruption of pregnancy There are two indications for the induction of abortion in this condition first, the vital indication, when it is necessary to save the life of the gravida who is in immediate danger of dying, and second, the prophylactic indication, when it is done to prevent the development of the disease which may be expected to occur from gestation and labor The operation is rarely done for the vital indication It does not hold with a patient in the first stage of tuberculosis and with one in the second and third stages only in the last half of pregnancy when artificial abortion is generally useless

Practically, nearly all therapeutic abortions for this complication are made for the prophylactic indication The justification of the operation depends on the correctness of the assumption that the patient's condition will suffer serious injury by the continuation of gestation and that this injury can be averted by the abortion It is evidently very difficult to reach objective certainty with such an assumption The correctness of the conclusions must depend on the ability of the physician to form a correct judgment Assuming that he possesses a good theoretical knowledge of the premises and an acute sense of his responsibility, yet he must have experience Few physicians have seen enough cases to enable them to form a correct judgment from their own experience The reports from the literature are hardly encouraging Veit collected 745 cases of induced abortion for this complication Of this number the outcome was given in only 347 cases In only 199 or about 57 per cent were the patients reported as improved One patient died as the result of the operation and 107 patients died within a short period while forty-one more are reported as unchanged This shows an absolute failure of the operation in about 43 per cent of the cases This is certainly a discouraging outlook It may be admitted that not all of these operations were done from the prophylactic indication Also, there is no classification of the cases showing the stage of the disease The report is valuable, however, to counteract the impression that the justification of the operation may be assumed

It is indeed possible that more years of life would be saved if the operation were entirely abandoned We have of course the destruction of fetal life or a fetal mortality of 100 per cent Is this offset by the increased length of life of the 57 per cent of mothers whose condition is improved by the operation?

The legal aspect of the question demands attention Our laws do not recognize the prophylactic indication Only those abortions are exempted from the penalties of the criminal act that are done to save the life of the mother It is generally assumed by physicians that an abortion done to save the health of the mother would also be accepted, but lawyers by no means agree to this assumption In Germany this feature of the law has been much discussed in the last two years

It is certainly not easy to find a logical justification of the prophylactic abortion It is, of course, feticide — a destruction of human life Who has the right to destroy this life? Has the mother? If so, can she give the right to a third person? When the mother is in imminent danger of death from the fetus it may be admitted that she can protect herself by destroying the fetal parasite But when there is only an assumption that her health may be injured by the presence of the fetus, her right to take the fetal life is certainly much more questionable

These considerations simply show that the question is a complicated and serious one, and that the responsibility of the physician who decides in favor of the measure is great It is certainly desirable that the decision should be made only after a professional consultation It is often true, however, that an internist is more apt to recommend the operation than to veto it The obstetrician is not freed from his responsibility when an operation is recommended that he cannot approve It would be no less than degrading for anyone to employ his skill as an instrument to do what he considers wrong or unjustifiable

My own conclusion is that we must individualize Sometimes, but rarely, abortion is justified It should be done in the second half of pregnancy, only for the vital indication All effort here should be made to save the fetus — to bring it to a safe viability term If that cannot be done and the mother is about to die, we may take the only chance to prolong her life In the first half of pregnancy we should carefully watch the progress of the disease If the patient is under the most approved treatment and nevertheless grows worse, as shown by cough, fever, and loss of weight, with hemoptysis, then abortion should be induced We must particularly take into consideration and allow for nausea and vomiting and other disturbances occurring in the second and third months of pregnancy On this account it is sometimes difficult to decide on the operation before the fifteenth or sixteenth week

A study of the conjunctival and cutaneous reactions in tuberculosis have shown that in an advanced stage of tuberculosis there may be a negative reaction to either This is regarded as a bad sign since it denotes the lack of reaction in the organism Wolff-Eisner has proposed to apply this fact in confirming the indication for induction of abortion when pregnancy is complicated with tuberculosis In a case in which previously a positive Wolff-Eisner test showed a good reaction, its loss would denote a bad prognosis If the reliability of this test is confirmed it may assist in deciding on an operation

Much has been said of the social indication It is a dangerous subject but cannot be ignored A poor woman who has a number of children, who contracts tuberculosis and then becomes pregnant, is certainly in a different class from a well-to do young woman in her first or second pregnancy Without subscribing to the justifiability of the social indication as such, we agree that the social condition has a bearing on the prognosis and becomes a factor in deciding the prophylactic indication

It may not be out of place in this connection to add that abortionists are beginning to use the prophylactic indication as an excuse for inducing abortion in cases in which there is no suspicion of tuberculosis Women who wish to have an abortion have learned to use this plea and represent to the physician that they fear tuberculosis and desire help for this reason Criminal abortion is rapidly coming to be recognized as a crime that affects the morals, health and lives of a considerable portion of many communities and even seriously threatens the existence of nations Anything that encourages the crime must be avoided The induction of abortion for weak or doubtful indications must not be allowed

METHOD OF INDUCTION OF ABORTION

The best operation is one that involves the least risk from hemorrhage, infection and shock During the first twelve weeks the uterus may be emptied under anesthesia with rapid dilatation and curettage From the twelfth to the twentieth week a preliminary dilatation of from sixteen to twenty-four hours with laminaria tents should be employed Sometimes the tent dilatation is desirable as early as the tenth week whenever the cervix seems firm and might dilate with difficulty Of course, the danger of the curet must be kept in mind and only an instrument with a broad loop and a flexible shank should be used Some expert operators prefer a hysterotomy, but I believe the average physician will [illegible]e less risk with dilatation and curet [illegible] ha [illegible] ious stated, sterilization may [illegible] tion of the uterus In the rare cases of induction of abortion between the twentieth and twenty-eighth weeks hysterotomy is probably the safest and least exhausting procedure

During pregnancy the patient should be treated like any other patient with tuberculosis She should breathe fresh air, be well fed with good nutritious food and avoid exhaustion or fatigue Like other patients she must learn to take care of herself, avoid other infections and diminish the danger of infecting others Whenever possible a course at a sanatorium is desirable

During the entire pregnancy she should be kept under very close watch Temperature and pulse should be taken two or three times a day Weight should be taken twice a week Elimination by bowels and kidney should be watched The amount of exercise should be regulated and the amount of sleep attained should be known In particular the diet should be controlled and its exact caloric value determined and recorded

Even when the patient has done very well during the middle of pregnancy, she may retrograde in the last two months and reach a serious condition bordering on collapse on account of disturbances in nutrition and respiration Here the induction of premature labor is urgently indicated By relieving the patient from the most trying four to six weeks of pregnancy she comes to the arduous period of the puerperium in a better condition and with better prospects On account of the child the operation should be postponed to the end of the thirty-sixth week if possible Then it should be done so as to furnish the quickest relief Generally metreurysis after rupture of the membranes is the best method After the introduction of the bag pituitary extract may hasten the labor Sometimes a vaginal cesarean section will prove the most serviceable operation

The watchful care of pregnancy is redoubled during labor The physician should remain with the patient, not for the purpose of interfering but to observe the progress and the effect of the labor Every possible care should be taken to prevent infection In particular the third stage should be managed with patience to avoid hemorrhage and infection

It is a well-recognized fact that the puerperium is the period of greatest danger This may be due, as already suggested, to breaking up of old infective foci by labor and the lighting up of new and extensive infections in the lungs It may be due to the dissemination of tuberculous infection from the placenta Sometimes acute miliary tuberculosis occurs and is differentiated with difficulty from puerperal sepsis Genital wound infection may occur and become unusually virulent on account of the diminished resistance of the patient Loss of sleep from disturbance of the baby and from lactational troubles may be a factor If the patient has been used to sleeping in the open air and is now kept in a room, this confinement will distress her An unnecessary restriction of the diet may help to reduce her strength

All these disturbing factors should be considered in the management Granted a safe labor and subsequent care that obviates puerperal infection, with a good diet, fresh air, and removal of worry on account of the child, a tuberculous patient will avoid most of the dangers of the dreaded puerperium

NURSING IN TUBERCULOSIS

The objections to the nursing of the baby by the mother are the danger of infecting the child and the strain of nursing on the mother The child's chances of escaping infection are no doubt better if it is removed from the mother entirely However, this is often impossible The chance of infecting the child will be lessened if she has learned to take care of the sputum In poorer houses it is of great importance to train the mother If a mother has fever, cough and many bacilli in the sputum she should not be in contact with her child or with other members of the family In the first stage, however, the danger of infecting the child from nursing is not much greater than that which arises from caring for the child

That nursing is an added strain on the mother is true and this furnishes a good reason in many cases for forbidding nursing from the start or after a short time Consequently, the same care that was given to the gravida must be extended to the puerpera If she loses weight and begins to decline in strength, she must wean the child at once

The rule of procedure is as follows In any case, if the mother can afford to employ a wet-nurse she should do so If one is not to be obtained and the child is strong it is fed on modified cow's milk A competent child's nurse should take entire charge of the child If the child is weak or premature and not likely to thrive on artificial food it may nurse from the mother at least in part but with every precaution to prevent infection It is better to give the milk pumped from the breasts If the mother cannot afford to employ a wet-nurse or a child's nurse but must care for the child herself, she may begin to feed it once or twice a day Little by little she should wean it so that by the end of three or four months nursing is entirely abandoned The entire management must be strictly superintended by the physician

SANATORIUM AND DISPENSARY CARE

Municipal and private sanatoriums and dispensaries should give special care to women before confinement and to the mother and child At present there seems to be no provision for this class of patients in the United States Large institutions should have special departments for these cases In populous cities special sanatoriums for tuberculous gravidæ and for tuberculous children would be desirable To such institutions could be sent all patients who cannot be satisfactorily treated at home No other class of tuberculous patients is in as much need of proper treatment and no other class is at present so much neglected There are probably 10,000 women yearly in this country who should be sent to sanatoriums With an average residence of three months to each patient they would require 2,500 beds or fifty institutions with fifty beds each

A children's department should be provided in connection with the maternity department where children under 4 years, as a rule already infected, whom the mothers could not leave at home, might be received The establishment of free maternity and children's sanatoriums for tuberculous patients would attack the disease at its source and thus aid materially in its eradication

IMPORTANCE OF THE PROBLEM

In the study of this problem there is some danger that we lose ourselves in the discussion of professional technical details What is the end of the whole matter? It cannot be to save a few months or years of life to poor sick women who as long as they live will be sources of danger to their families and to the community It cannot be to bring into the world weak, defective children who become infected early and go through a short, miserable life spreading disease and undoing the work that has cost much effort and money It were better to sacrifice both women and children

Our aim is to save and cure tuberculous women if possible, if not, to prevent them from injuring others We must protect the children from infection This cannot be done by individual effort Concerted professional and social effort is necessary This is not simply a medical or obstetrical question in the old sense It is a part, and a very important part, of the whole tuberculosis problem

Seen from the point of view of public health and preventive medicine, the problem has a different aspect from that which it formerly presented to the short-sighted practitioner traveling in the rut of custom Prevention of pregnancy, whether it involves celibacy or sterilization, comes to be almost a moral law Induction of abortion remains the area still covered with the mists of doubt. Ethical, legal and professional mists make a uniform treatment impossible The care of the mother and the protection of the child demand professional, philanthropic and state cooperation and that alone promises great results

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ABSTRACT OF DISCUSSION

Dr C. L Minor, Asheville I am in accord with the statement that the woman with active and progressive tuberculosis, producing constitutional symptoms, is unfit for marriage and unfit for the production of a child, but with regard to the woman whom we know perfectly well to be tuberculous, but who has no active trouble at the time, I think the rule that Dr Bacon lays down is too wide I have been called on very often to study the question in my patients, and I am not ashamed to say that I have allowed the marriage of tuberculous girls and I have seen a good psychologic effect and benefit to the patients from these marriages If the whole purpose of medicine is eugenics, possibly that may be wrong It comes down to a question of prognosis and in the estimate of prognosis, I imagine that the man who concerns himself with tuberculosis is better qualified to draw a conclusion than the gynecologist Granted that the actively tuberculous woman has had a child, what shall we do with the child? The veterinarian tells us that calves born of tuberculous mothers that are taken away at once and kept elsewhere grow up into healthy cows Hard as it is, the child of a tuberculous mother should likewise be separated from its mother, perhaps not absolutely, but the care must be extreme the separation as close to absolute as it is possible to make it This should be from the very beginning, except for one or two days There should be no nursing at all There is nothing more disastrous to a tuberculous woman than lactation In the eighteenth century and in the beginning of the nineteenth it was stated that pregnancy had a good effect on tuberculosis Since 1843 it has been recognized that this was a mistake and that it is disastrous, and yet, in the early months I have seen distinctly good effects Metabolism seems to be improved and things go splendidly After that point the course is usually downward If the tuberculosis is active I believe the abortion should be brought about in the early months From the fifth month on the consensus of opinion is, for reasons that have not been explained that interference has a worse effect than allowing the case to go to labor Instrumental interference favors dissemination If the patient goes to labor, Dr Brown of Saranac Lake has advised the use of chloroform to avoid difficult labor and exertion on the part of the patient and to prevent dissemination Lessening the loss of blood in labor is also very important. Active tuberculosis cases in which the process is making advances, as shown by constitutional symptoms, will in a very large majority of cases go down hill It has been said that the tuberculous woman may have one child with safety, two possibly, three never That, I believe, is true

Dr S M Brickner, New York What is it in the nature of pregnancy which when combined with an active tuberculosis makes for injury to the patient? Is it the increased strain for the support of the woman and infant? Is it the increase in toxemia due to the tuberculosis? Trembley of Saranac Lake has had a larger experience in the observation of pregnant women with tuberculosis than any one else in the world He has found that about 46 per cent of his tuberculous women who have become pregnant have died, although he has not stated the time each lived after conception, and 60 per cent of these pregnant women permitted to go through have died This would seem to offer an opportunity for the induction of abortion I would tabulate into three groups patients with active tuberculosis that have become pregnant 1 There are some in whom no therapeutic measure will offer any relief That would include those with laryngeal tuberculosis and miliary tuberculosis—women who would be certain to die under all circumstances 2 A group of patients might possibly be helped by an interruption of the pregnancy—those patients with a moderate infection only, not necessarily incipient, a little beyond the incipient stage, and yet who might by nursing and care and by having an abortion induced, be benefited as to their tuberculosis 3 There are unquestionably patients, and I have had nine under my observation, who with a moderate tuberculosis can safely be permitted to go through their pregnancy After all, as has been pointed out by Drs Minor and Bacon, the question is one of prognosis and I never would interfere with a woman who was actively tuberculous and at the same time pregnant, without the authoritative statement of an internist or one who specializes in tuberculosis, as to the possible outcome Even then it may not be possible to prognosticate which woman will go through with safety and which will not I was glad that Dr Bacon touched on the question of sterilization

Dr. R. L Dickinson, Brooklyn I have recently had occasion to review the German literature on the effect of the *x* ray on the ovaries Much work is being done by the best men and it is the general consensus of opinion that the *x* ray is of value in this direction It can be made to shrink an ovary and put it temporarily out of function by a few treatments In experiments on guinea pigs the ovary was reduced to one half the normal size, while the other remained full size As with the male operator in that line, the sterility is temporary Further experimentation with dosage and duration may demonstrate that sterilization may be effectively produced by non operative measures There is no measure for the woman so simple, however, as vasectomy in the male There is possibly a method which can be developed to be nearly as simple and quite as effective I have introduced a sound with a little platinum tip and produced a cauterization by heat at each corner of the uterus in order to produce a stricture and an obliteration I have not yet dared to do that on the living woman in order to sterilize, but have done it a few weeks before hysterectomy and have seen that the stricture occurs I shall sometime in the future show some of these cases and present the method for adoption As a rule, laparotomy is a very large contract to take just for the purpose of sterilization

Dr Henry Farnum Stoll, Hartford, Conn It is a good rule that the woman who has had active tuberculosis should not become pregnant until two years after the subsidence of all symptoms The symptoms are the important things, not the physical signs The straining during the second stage should be avoided by the use of forceps When the forceps has not been used there have been signs of recent extensive dissemination found at autopsy probably the result of rupture of caseous glands due to the terrific strain that takes place when labor follows its normal course When there is anxiety to have a child good results have been obtained by the use of tuberculin throughout pregnancy when given by men experienced in its use

In regard to the time of operation if the woman has the signs and symptoms of an active tuberculosis the abortion should be done early, [illegible]n the first few months, there is a high p[illegible] f[illegible] some stat[illegible] believe, being as high [illegible] ter, t[illegible]is less, and in the third stage, much less If the pregnancy is allowed to go on until after the middle period, very little can be hoped for as far as the mother is concerned from interrupting the pregnancy In general, it is better to terminate the pregnancy early than to try to get a living child In regard to a tuberculous mother nursing the child, the French Society for the Prevention of Tuberculosis reports 250 children removed from tuberculous mothers and in no instance did tuberculosis develop

Dr J C Litzenberg Minneapolis Two years ago in the Schauta clinic there were twenty two abortions in the women entering the clinic in five months Von Rosthorn was also of the opinion that certain women with active tuberculosis should have the uterus emptied One woman came in for the sixth therapeutic abortion Only then was she sterilized This opinion was also shared by the men in the medical clinic We sometimes form opinions and do things when we really do not have the statistics to back them up Unless they have changed their opinion in two years the clinicians in Vienna believe that every woman with active tuberculosis should in early pregnancy have the uterus emptied There is an exception made in those far advanced There is another condition in which operation is done if seen early—those with tuberculosis of the larynx, of whom 100 per cent die if the pregnancy is allowed to continue

Dr L M Gates, Scranton, Pa I do not believe that you can cauterize and be sure that you are doing any thing more than producing a stricture, and you are thereby liable to produce the worse condition of ectopic pregnancy I would also repudiate the use of chloroform in these cases as being an irritant to the lungs and an injury to the blood We all know that the use of chloroform increases the amount of blood lost by the patient The tendency with tuberculous women is to be relaxed and chloroform is a further relaxant When labor is over the effect of the chloroform is to cause post partum hemorrhage I would not use chloroform in the termination of labor with forceps in these cases

Dr T M Burns, Denver It seems to be true that a certain proportion of patients get worse, not because of the pregnancy, but because of the disease Another proportion get worse because of the pregnancy Another proportion stay quiescent and another proportion get better From my experience in Colorado I do not believe that the internist is capable of saying when we should produce abortion I know of several cases in which an internist said abortion should be induced but in which the patient went on to labor and was better than before pregnancy When the patient comes to us in pregnancy, I believe the better way is to watch her and as soon as she starts to get worse induce premature labor or abortion by means of two catheters or two bougies in the uterus and gauze tampon or a rubber bag in the vagina I do not believe this will produce any shock unless an anesthetic is necessary In many curettements morphin will take the place of ether or chloroform

Dr H G Wetherill, Denver I have not practiced sterilization, but it seems to me in view of the very great simplicity of sterilizing the male by vasectomy that the time has come when this simple operation should be considered to prevent pregnancy under these circumstances rather than an abdominal operation on the woman

Dr C S Bacon, Chicago Whether a woman is cured of tuberculosis and whether or not she dare marry are questions which we must leave to the specialist for determination I think the suggestion of Dr Stoll that two years' freedom from the disease is desirable is a good one The rule given by Martin of one year's freedom from the disease is generally adopted and I had that in mind I think two years would be still better I cannot understand how one can advocate inducing abortion on the same patient time after time for this condition If we are obliged in any particular case because of the special indications to induce abortion we should afterward insist on sterilization Nothing seems to me more harmful from all sides than a repeated induction of abortion As to the method of sterilization, of course these instruments of Dr Dickinson are interesting but we cannot rely on them at present We must have absolutely reliable methods Those who have spoken have assumed an abdominal laparotomy for tubal sterilization We can do a vaginal celiotomy with much less shock Some anesthesia may be desirable The ether anesthesia, as little as we can get along with, is much safer than chloroform The use of forceps is of course, not to be recommended in all cases A symphyseotomy may be done Under no circumstances should a dangerous forceps operation be undertaken The same obstetric principles as apply in all cases are to be observed

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INTRADURAL ROOT ANASTOMOSIS FOR THE RELIEF OF PARALYSIS OF THE BLADDER

AND THE APPLICATION OF THE SAME METHOD IN OTHER PARALYTIC AFFECTIONS *

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Any method of surgical treatment which promises relief or cure of a distressing condition hitherto irremediable by any known treatment, medical or surgical, is worthy of close attention and of adoption after its value has been demonstrated Incontinence of urine and of feces, especially the former, in cases of traumatism causing complete or partial paraplegia is always a distressing condition, and not infrequently one of danger through the probabilities of cystitis and general infection

We believe that the following case is the first in which the operation of intradural anastomosis of spinal nerve roots (the first lumbar to the third and fourth sacral) has been successfully accomplished, and in only one instance has it, so far as we know, hitherto been tried The case, as the history will show, was one of severe traumatism at first causing complete paraplegia, including incontinence of urine and feces In a few months the paraplegia and accompanying anesthesia were largely recovered from, but the patient was left with an absolute incontinence Eight months after the operation the patient stated that he could dispense with the urinal, which he had hitherto worn constantly, for a period of twelve hours and that with the assistance of pressure over the suprapubic region, partial evacuation of the bladder was possible

Of course several months are required for physiologic union to take place fully in a case of either peripheral or root anastomosis but the result in this case so far is most satisfactory The operation has also shown that no reason exists why nerve-root crossing should not become a valuable addition to our neural surgical procedures, not only for the relief of paralysis of the bladder and bowels of organic origin, but also for obstinate and distressing enuresis of unknown cause The operation also has a field in some forms of residual paralysis after poliomyelitis and probably in some monoplegias of central or peripheral origin

REPORT OF CASE

J S G, aged 27, married, was a business man who had always had unusually good health until he met with an accident, July 6, 1911 A large gas tank exploded in a shop in which he was at the time He was thrown some distance with much violence and was rendered unconscious, remaining

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty Third Annual Session, held at Atlantic City June 1912.

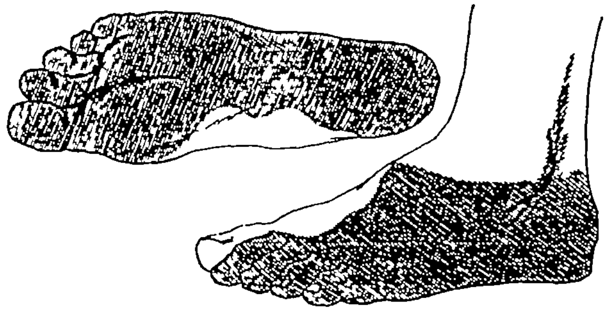
so for five or six hours He was taken about thirty or forty miles to a hospital

He had lost power in both lower extremities Immediately after the accident his feet were very sensitive to pressure, so much so that it was impossible for him to have his stockings put on His bladder and bowels were paralyzed He had to be catheterized for four weeks He gradually improved, especially as regards power in his lower limbs, but certain very positive conditions remained when he was first examined by us The loss of power in his lower extremities showed itself then simply in an inability to lift himself and stand on his toes and fore part of his feet, the impairment being therefore chiefly in the calf movements

His bladder continued paralyzed and in consequence of this he had absolute incontinence, and he had also developed some cystitis His bowels were torpid, although not so bad in this respect as at first When they were opened by the use of a cathartic he could not fully control the evacuation

About a week after the accident he suffered much pain in his back This disappeared, and he had not had any shooting pains or girdling pains along the spinal column He had no reflex spasms or jerkings in the lower extremities

Several examinations gave the following results Station and gait were good In attempting to stand on the toes and fore part of his foot he had evident difficulty, although able to perform these movements For a long time, as above indicated, he was not able to stand in this way at all Examination of separate movements of the foot showed that he could abduct, adduct, dorsal flex, plantar flex and perform movements of all possible description on the ankle The power to elevate the heel was slightly impaired Extension and plantar flexion of the great toe and other toes were preserved All movements of the leg on the thigh and the thigh on the abdomen were preserved and well performed Knee jerk on the right was present and normal, on the left it was much impaired and sometimes absent Both ankle jerks were absent His great toes remained in a slightly extended position but no Babinski response was obtained, and indeed no reflex whatever was obtained on both dull and sharp stimulation of the sole Examinations for touch, pain and extreme heat and cold showed that these forms of sensation were lost over the sole of the left foot except on an area of its inner aspect, the same being true of the dorsum of the foot except along its inner border (Fig 1) The areas of impairment reached about as high as the internal malleolus On the right foot similar areas were impaired, but impairment or loss was more marked over the toes (Fig 2) Callus on the dorsum of the right foot at the metacarpophalangeal articulation had been present, according to the patient, since he began wearing shoes after the accident Sensation was lost over the right buttock and thigh, in an approximately saddle shaped area which gradually decreased in width to its termination an inch or two above the popliteal space On the left a somewhat similar area was present but was narrower and shorter reaching only to a point just below the gluteal fold (Fig 3) The scrotum was also anesthetic An impairment of sensation was present in the coccygeal and anal region



Figs 1 and 2 —Areas of impaired sensation on sole and dorsum of left foot.

A study of the areas of anesthesia indicated that the nerve roots or segments of the cord involved were for the feet, the fifth lumbar and first sacral and for the buttock, scrotum and anal region, the second and third sacral, probably the fourth and possibly the fifth

The patient's greatest distress was by far that which resulted from the paralysis of his bladder, with distention and overflow He constantly had to wear a urinal He thought that the power to expel the urine had not improved but the inability had probably increased to some extent, while in other respects he was conscious of much improvement His sexual powers were practically abolished His feelings of numbness in the feet, and his weakness in trying to stand on his toes he was sure were decidedly less, continuous improvement having taken place He expressed himself as being quite able to stand all his other afflictions if he could only get rid in whole or in part of the distressing bladder trouble

The patient was admitted to the hospital of the University of Pennsylvania for further investigation Roentgen ray examinations were made by Dr H K Pancoast, who reported a fracture of the right half of the first lumbar vertebra

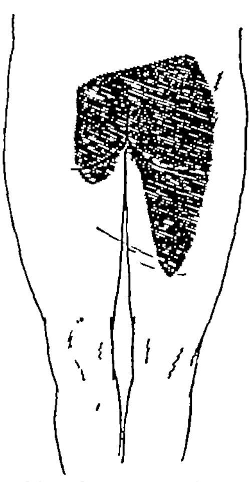


Fig 3 —Areas of impaired sensation on back of the thighs

After much consideration of the subject with the approval of the patient's brother, who was a physician, and with the urgent approval of the patient himself, it was determined to try to anastomose the twelfth thoracic or the first lumbar root to the third and fourth sacral roots It was recognized that nerve anastomosis offered the only hope for the patient's relief and as this was anatomically impossible outside of the vertebral canal, it was thought that it might be accomplished intradurally

The operation was performed by Dr Frazier, Feb 29, 1912 The following were the notes made by him at the time of the operation and the subsequent hospital records

Laminectomy — Intradural Anastomosis of the First Lumbar and Third and Fourth Sacral Roots —Through a curved incision a cutaneous flap was reflected and the spinous processes and laminae of the twelfth thoracic and first and second lumbar vertebrae were removed Evidently there had been a fracture of the second lumbar vertebra, as several fragments were found quite loose and readily detached The dural sac seemed unusually distended, and when it was opened a considerable quantity of cerebrospinal fluid escaped (from 1 to 2 ounces), even though the patient was in the reversed Trendelenburg position with the level of the head considerably below that of the pelvis Inspection of the cord revealed no evidence of injury There were no adhesions, no areas of softening, in fact no abnormality that could be detected with the naked eye After consultation with Dr Mills, I decided to carry out the plan which we had considered carefully before the operation and had submitted to the patient's brother It was intended to effect an anastomosis between the twelfth thoracic and third and fourth sacral nerves intradurally

With the assistance of Dr Edward M Williams, using a unipolar electrode, the other, a large pad electrode being closely applied to the shoulder of the same side the twelfth thoracic and the first lumbar were stimulated within the dural sac, and the one distinguished from the other by the fact that the contractions in the case of the twelfth thoracic were confined altogether to the trunk and abdominal muscles, while in the case of the first lumbar they were associated with contractions of the extensor group of the thigh Attention was then turned to the conus for the purpose of identifying the third sacral root What was taken to be the second sacral was first picked up on a blunt hook, and its faradic stimulation was followed by contractions only of the big toe on the affected side On the ground that we were dealing with the second sacral, the next two nerves adjacent to it and to the inner side were selected for the anastomosis As it was found by measurements that the twelfth thoracic, even if divided extradurally from its point of exit from the canal, would not reach the conus, it was decided to use the first lumbar The latter was divided extradurally at its exit from the spinal canal and brought within the dural sac through a transverse incision in the dura An end to end anastomosis was effected by a single No 1 Chinese silk suture

After the nerves had been identified by faradization, pads saturated with a 4 per cent. stovain solution were kept applied to the cord in order to block, if possible, any harmful impulses

Toward the latter part of the operation the patient's respiration became very shallow and feeble, but on changing his position to his side and resorting to moderate stimulation, normal respiratory function was promptly restored The dura was closed with a continuous silk suture, and the musculoaponeurotic layer with buried catgut sutures The usual cigaret drain, together with a small wick of iodoform gauze, was introduced through a stab wound down to a point of bleeding from the vertebral veins

The operation was necessarily long and tedious, but at no time were any special difficulties encountered, except in one instance when a vein was divided at the time the first lumbar root was cut This was followed by quite free bleeding, readily controlled, however, by a tampon

The identification of the various roots was simpler than had been anticipated The anastomosis was effected on the left side only, where the sensory evidence indicated less injury to the cord or nerve roots

On March 4, 1912, the patient complained of deep seated pain in his thigh, making him gasp His ankle felt stiff and sore He thought also he could feel urine accumulating in the bladder

On March 11, 1912, Dr Mills examined the patient without moving him from a recumbent position Flexion, extension and other movements of the thighs were good and all the movements of the feet and toes were present, these having been tested in detail, the only weakness shown was in dorsal flexion and abduction of the right foot, this being only a partial loss The knee jerks were absent and there was no Babinski response on either side Slight plantar flexion of the toes occurred on plantar stimulation

Tactile sensation, tested by light touch of the finger, was everywhere preserved on the feet and legs below the knees Pain sense tested by pricking was defective in definite similar areas on both sides It was lost on the soles of the feet except the inner side about the hollow of the foot half way between the roots of the toes and the heel On the dorsum it was lost entirely on the inside over all the toes In a linear area from the metatarsophalangeal articulation three or four inches toward the instep, about the instep and toward the internal malleolus, this area of retained sensation was enlarged On the outside of the foot a tongue of analgesia extended an inch or two above the ankle As we were unwilling to move the patient at this time he was not examined over the buttocks, thighs, etc

On March 27, 1912 the patient was discharged He felt distention of the bladder on the introduction of 10 ounces of boric solution but he did not feel less amounts of boric solution or of urine

As stated at the beginning of the article, eight months after the operation the patient could dispense with the urinal, which he had hitherto worn constantly, for a period of twelve hours, and with the assistance of pressure over the suprapubic region, partial evacuation of the bladder was possible[1]

NERVE SUPPLY OF THE BLADDER

According to Frankl-Hochwart,[2] whose monograph on the "Nervous Diseases of the Bladder" is among the most reliable and most recent (1906), the bladder has two or three sources of supply In the first place it has a supply through the sympathetic nervous system Efferent nerves pass by way of the rami communicantes from the upper lumbar segments of the cord according to Langley and Anderson (at least in the cat) These take their course through the lumbar sympathetic to the inferior mesenteric ganglia From these inferior mesenteric ganglia three gray hypogastric nerves penetrate the muscles of the bladder Another sympathetic supply is from the upper sacral segments and roots These nervi erigentes go to the hypogastric plexus From this plexus, according to Griffith, the fibers pass in three layers, one to the fundus, another to the anterior part of the bladder and around the neck, and the third to the vesical part of the urethra

In the human being, according to Frankl-Hochwart and Russian and other authorities with whom he agrees, the somatic nerves to the bladder are from the third and fourth sacral segments and roots

Kilvington[3] has published the only article on nerve crossing within the spinal canal with which we have become acquainted In this article he first briefly discusses the fact that regeneration does not take place within the spinal cord, referring to the well-known fact that it seems to be necessary for the primitive sheath to be present in order that such regenerative processes may proceed He then affirms that such regeneration may occur when nerves are united either intradurally or extradurally within the vertebral canal

Experiments were made on several dogs in order to test the possibility of bringing about restoration of the functions of the bladder and rectum through nerve crossing and subsequent regeneration Attention is called to the facts shown by various physiologists, as Langley and Anderson and Sherrington (cited by Schäfer[4]) that in the dog the nerve-supply to the bladder and rectum is chiefly from the second and third sacrals and sometimes from the first sacral and even the seventh lumbar. According to Kilvington the second and third sacral nerves always give bladder contraction sufficient to expel the contents, although the first sacral in a few cases gave bladder contraction, but not enough to cause micturition

Kilvington's instructive experiments on three large dogs and their results are recorded by him in detail In his summary of these experiments he concludes that it is shown that the last lumbar, when joined to the second and third sacral roots, on electrical stimulation can produce all the effects which the latter give on the untouched side

After Kilvington had determined by investigation on the cadaver the feasibility of intraspinal root anastomosis in man, Mr Bird at his suggestion attempted the operation in one case, this operation proved unsuccessful because of conditions found after the laminectomy

In his experiments on dogs Kilvington in two instances anastomosed both motor and sensory roots (a mixed nerve in effect) to motor and sensory roots below In another experiment he crossed the anterior or motor root above with both sensory and motor roots below In the case recorded in this paper we anastomosed a motor root above with a motor and sensory root below

Certain disadvantages might arise from mixed anastomoses It is doubtful whether in the surgical procedure the motor root above could be properly apposed to the motor portion of the mixed nerve below Again,

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[1] The patient has reported once since the presentation of the paper—in June—that he is now able to retain urine for two and a half hours at a time and that the expulsive power of the bladder seems a little greater than at the last report

[2] Frankl Hochwart L and Zuckerkandl Die nervosen Erkrankungen der Harnblase, Wien 1906

[3] Kilvington Basil An Investigation on the Regeneration of Nerves with Regard to Surgical Treatment of Certain Paralyses, Brit. Med. Jour 1907, i, 988

[4] Schäfer Physiology ii, 342.

if an anterior root as in one of Kilvington's experiments, were crossed with both sensory and motor roots below, the only physiologic result, if the procedure were successful, would be the transfer of motor impulses A motor root of one distribution might physiologically as well as anatomically unite with a motor root belonging to another segment of the cord, but it is doubtful whether a motor root would physiologically combine with a sensory root even if they were brought into physical union

A sensory root may be combined anatomically and physiologically with a sensory root of its own sort, but it may be questionable whether a somatic sensory root will serve to take the place of a destroyed visceral sensory nerve

Our idea in this operation was to perform an experiment in anastomosis for the relief of the paralysis of the walls or sphincter of the bladder, or of both, similar to that which has been performed extravertebrally in cases of poliomyelitis, traumatic severance of peripheral nerves and other paralyses The bladder is a muscular organ with a motor nerve-supply, which in large part at least is similar to that of muscles everywhere in the body, although it does in part, as has been shown, receive its innervation through the sympathetic nervous system By uniting a motor root which is a part of a healthy reflex arc with the motor root of a destroyed sensorimotor region of the cord, both the sensory and the motor portions of the intact arc are utilized In addition the muscles supplied by the first lumbar nerves in the human subject probably have some accessory value in bladder function

VENTRAL ROOT ANASTOMOSES

Cervical	Above			Below				Opposite		
	Cervical	Dorsal	Lumbar	Cervical	Dorsal	Lumbar	Sacral	Dorsal	Lumbar	Sacral
5				6*						
6	5			7‡						
7	6			8§						
8	7				1†					
Dorsal										
1	7* 8				2			1*		
2	8†	1			3			1‡ 2, 3*		
3		1 2			4			1 2 3 4		
4		1 2 3			5			1*, 2 3, 4 5		
5		2 3 4			6			2, 3 4 5 6*		
6		3 4, 5			7			3 4 5 6, 7*		
7		3 4 5 6						4 5 6, 7		
8		5* 6 7						6 7 8		
9		6*, 7 8						7 8 9		
10		8 9						8 9 10		
11		9* 9 10			12			8 9, 10 11		
12		8‡ 9 10 11				1		9 10 11 12	1	
Lumbar										
1		8 9 10 11 12				2 3 4		10 11 12	1 2 3 4,* 5	1 2
2		11 12	1			3 4, 5	1 2 3	11, 12	1 2 3 4 5	1 2
3		11 12	1 2			4 5	1 2 3	11 12	1 2 3 4 5	1 2 3
4		10, 11 12	1 2 3			5	1 2 3	10 11 12	1 2 3 4 5	1 2 3
5**		9* 10 11 12	1 2 3 4				1 2 3	10 11 12	1 2 3 4 5	1 2, 3

* Barely
† Easily
‡ Just
§ Readily
** 11 cm in length

PRACTICAL SUGGESTIONS

We have discussed the physiologic problems involved in the reestablishment of innervation to the muscles of the bladder, and the operation as performed has been described Such features as apply only to matters of technic remain to be considered There is little doubt as to the advisability of a bilateral laminectomy when the identification of roots requires ample exposure and when, as in future cases, we would expect to effect anastomoses between the roots on both sides It is often difficult to determine the exact position of an individual vertebra, so that in the future we would make sure of this before the operation by having a radiograph taken with a lead strip over what was believed to be the first lumbar vertebra This would enable the operator at once to be able without the use of the electrode to identify the first lumbar root which leaves the vertebral canal in the foramen between the bodies of the first and second lumbar vertebrae Therefore the identification of the third or the fourth sacral root would alone remain, and this could be done with any degree of scientific accuracy only by the use of the electrode, as the massed roots composing the conus could not otherwise be distinguished one from the other It was suggested by Dr E M Williams at the time of the operation that with the bladder filled with boric solution and a small manometer connected with the catheter, stimulation of the third and fourth sacral roots would be followed by an expulsive effort on the part of the extrusor muscles of the bladder which would readily be recorded on the manometer This is an excellent practical suggestion and will be taken advantage of at the next operation No difficulty should therefore be experienced in the future, in promptly recognizing the roots to be used in the anastomosis, and needless to say the anastomosis should be effected on both sides and not on one only, as in the case reported

The principles involved in suturing the divided roots in no wise differ from those which have been laid down for anastomosis of peripheral nerves, it should always be borne in mind that extreme gentleness the avoidance of trauma, the employment of proper suture material, absolute hemostasis, and the absence of infection are essential to success

It would be out of place here to discuss in detail the technic of the preliminary laminectomy It will be sufficient to emphasize two points which we regard as of importance in minimizing the risks of operation In the first place, we have found the method of administering the anesthetic by intratracheal insufflation to possess great advantages over the drop method not only for safety but also for convenience We place the patient in these operations in the prone position with the table elevated to an angle of 45 degrees from the waist to the foot, and with the trunk and head in the reversed Trendelenburg position This position is convenient for the operator and at the same time through the influence of gravity prevents the continuous outflow of cerebrospinal fluid It is a well-known fact that in prolonged operations when the patient is in the prone position (face down), the respiratory apparatus seems to wear out more readily, and under ether anesthesia proper oxygenation of t[illegible] terfered with The use of intratracheal [illegible] ly overcom[illegible] diffi

Predementia præcox is a condition which may also be acquired by faulty mental habits, and the close study of the school child which I have advocated will not be half so efficacious if cognizance is not taken of his emotional control and his attitude toward his associates and the world in general.

It seems unnecessary to point out how great a factor in the making of a better nation may be the training of the individual to fit into the place in life which he can most ably fill. A half moment's thought will convince you of it more clearly than I can with half an hour's talk.

The psychiatrist rarely sees these early cases. The teacher is the first one to observe them, the general practitioner comes second, perhaps the neurologist third, and the psychiatrist usually after symptoms are well advanced and the patient is suffering with an acute mental attack. At times, however, a case comes under our care during the prodromal period of an acute attack and we may be so fortunate as to abort it. After the acute attack much may be done by reeducation, especially along the lines of manual training of various sorts, and we are able to make something of the patient, even if less than he would have been had he not suffered his attack. Did time permit I could give numerous case-histories illustrating the value of reeducative methods, but, as it is, I can only refer you to the few objects which are on exhibition to illustrate this point more strikingly.

CYANOSIS IN DEMENTIA PRÆCOX *

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The trend of recent studies in dementia praecox has been toward the physical manifestations of the disease. The earlier writers concerned themselves mostly with the mental sphere and would make their diagnosis chiefly or solely on mental symptoms. But of late, independent of the psycho-analysts and those who urge a more or less strictly psychogenous origin, investigators of another and more material group, working from a physical point of view, have brought to light an array of clinical and objective signs which seem to be of great diagnostic importance, and will eventually, it is felt, assist in determining an etiology in this disease, the frequency and sociologic importance of which is only beginning to be appreciated by the general medical profession.

Omitting the pathologic and biochemical findings, the clinical signs of recognized value are: alteration in the deep tendon reflexes, increased at first, diminished or absent in late stages; irregular pulse, rapid in some instances, in others markedly slowed; excessive salivation, and variations of temperature, subnormal in some cases, elevated often in acute stages. Considerable work has been done on the ocular symptoms, among the most interesting being that of Tyson and Clark,[1] who report an "eye syndrome" peculiar to dementia præcox, embracing concomitant changes in the disks, pupils, visual fields and corneal sensibility. Others have called attention to the pupillary phenomena, consisting of abnormalities in size, outline and light reaction. In acute phases dilatation is frequently seen and in late stages a contracted, sometimes spastic pupil with inequality, irregular outline and ragged edges. Changes in the light reflex are frequently observed, especially in the terminal stages. Still others have described abnormalities in the skin, including hyperhidrosis, subnormal temperature, altered dermatographia and cyanosis. It is with cyanosis in particular that this paper is concerned.

A cutaneous cyanosis occurs in a number of diseases quite distinct and independent of that under consideration. It is observed in apparent health under transitory vasomotor conditions, but its frequent presence in dementia præcox without cardiac involvement would suggest that we have in this a sign but little less than pathognomonic. My interest in cyanosis began in the daily morning clinics at Danvers where patients are presented for diagnosis. The cyanotic hands of dementia præcox patients are in marked contrast to those of patients with other mental diseases, and inspired an investigation which has convinced me that cyanosis is a highly valuable diagnostic sign, especially when taken in connection with other symptoms of the malady.

During the past year 241 patients with dementia præcox, embracing all types and stages, were examined, and 78 per cent. were found to have some grade of cyanosis, from a mild degree to an extreme dusky purple. The distribution varies, being usually most marked over the dependant parts, yet the skin as a whole often has a bluish appearance, more noticeable in the upper back. The relative frequency of involvement of the hands, feet and back is as 9: 6: 5. Some patients may show cyanosis of the feet when there is none on the hands, and vice versa. Occasionally the face and lips present the most involvement. Cyanosis varies in the same patient from day to day or week to week. It may be absent one day and quite evident the next; this seems relatively independent of the surrounding temperature and the position assumed. The severest grade of cyanosis has been observed in a patient confined to bed. With respect to the three subgroups, in cases in which it was possible to make a subdivision, the catatonic form showed cyanosis in 90 per cent.; the hebephrenic in 75 per cent., and the paranoid in 50 per cent. This was also the relative order of the intensity.

It seems that the grade of cyanosis carries some prognostic significance. The cases deeply cyanosed apparently dement more rapidly and deeply. Acute catatonic excitement with marked cyanosis forecasts grave danger of collapse and death. From the point of view of differential diagnosis, cyanosis offers help when assistance is often badly needed, in differentiating dementia præcox from manic-depressive insanity. It is believed that cyanosis is exceptional in the latter disease, and in thirty cases including depressed, mixed and excited phases only two showed it, in one, a depressed case it was well marked, and in the other, a hypomaniacal case, fairly so. But without doubt, the skin in a manic-depressive has quite a different appearance from that of a precocious dement. Without having the figures to demonstrate, I also believe that cyanosis is of help in differentiating imbecility from dementia præcox, the skin of the imbecile being clear, except when the two psychoses are combined. Two cases might be cited as instances in which the presence of cyanosis helped to revise an earlier diagnosis. One patient, a woman of 35, at first appeared to be in a depressed phase of manic-depressive insanity, but later other symptoms cast doubt on this, and the additional development of a marked cyanosis pointed the way to a dementia præcox which

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

[1] Tyson and Clark: THE JOURNAL A. M. A., May 2, 1908, p. 1415.

the clinical course of the case confirmed The other case, that of a woman of 37, was provisionally diagnosed as paresis, the Wassermann reaction in the serum was reported suggestive but the cytologic examination of the spinal fluid was negative Later the presence of a marked cyanosis combined with impulsivity and other symptoms led to a reconsideration of the case and to a diagnosis of dementia præcox

What is the nature of this cyanosis? First of all, it does not seem dependent on blood-pressure, as the various investigators of blood-tension in dementia præcox have not reported any departure from normal In twenty-five cases which I have studied the average systolic pressure was 115 for a sitting position and 95 for a reclining position, the markedly cyanosed cases showing no variance from the average We know that we are at least dealing with a vasomotor phenomenon In this respect it is interesting to refer again to Tyson and Clark's paper [1] Their most frequent finding was a congestion of the disks, due to dilatation of the veins, and this is certainly analogous to the cutaneous phlebostasis The ocular syndrome of Tyson and Clark seemed to them somewhat similar to the toxic amblyopia of tobacco and alcohol and led them to the opinion that some sort of toxin, metabolic in nature, was the pathogenic agent, and that this toxin was primarily a vascular poison which led slowly to degeneration of the nerve elements The conclusions of Pighini[2] are somewhat different He believes that in the acute stages there is a destruction of nucleoproteins induced by some unknown morbid agent, and that it is not a typical toxic or destructive process such as seen in ordinary febrile diseases To account, furthermore, for the skin condition in dementia præcox, there must be some interference in the skin reflex arc with more or less disturbance of the vasomotor nuclei which Sano[3] locates in the anterior horns of the cord, but which are located elsewhere, chiefly in the sympathetic, by others The dermatographic reflex would indicate that there is indeed some alteration in the vasomotor innervation for as a rule this reflex is much diminished and occasionally absent In fifty-five cases studied for this point 60 per cent were found to have a diminished reflex

SUMMARY

A cutaneous cyanosis is found in a large majority of dementia præcox cases most frequently and intensely in the catatonic form, next in order in the hebephrenic and then the paranoid

It is part of a generalized vasomotor disturbance consisting in a phlebostasis, of unknown origin

Cyanosis is variable within large limits even in the same patient

Cyanosis offers a valuable diagnostic sign in differentiating dementia præcox from manic-depressive insanity, imbecility, hysteria, constitutional inferiority and occasionally the organic psychoses

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ABSTRACT OF DISCUSSION

ON PAPERS OF DRS DUNTON AND CORNELL

Dr. M Neustaedter, New York I have had occasion to examine backward children in New York schools for twelve years I find that the physical defects in these cases are less numerous than in the very best children in the schools, and they are not prone to have their defects corrected So far as I remember in over 1,200 cases 2 per cent have corrected the physical defects, and yet with a properly corrected diet and elimination of drugs and narcotics, such as tobacco, coffee and tea and alcoholic stimulants, we have achieved very good results I have followed them in the workshop and I have come to the conclusion that it is not manual labor alone that is required for improvement, it is the geographic and social environment of the child that counts more than anything else If we could take the child from the busy city into farm and country life and give him different ideal surroundings with proper diet, we could do much more for him than by using all the subtle scientific methods in the public schools exclusively in big cities

Dr B R. Tucker, Richmond, Va We see reference to seclusion in the predementia stage, and reference to a child being asocial We should draw a line of demarcation between a child who wants to play but does not enter into the games and occupations of childhood because of bashfulness, which may not overstep the normal line, and the child who is asocial and primarily does not want to enter into the occupations of childhood I have seen children who have been suspected of dementia praecox or some other mental disturbance simply because they were bashful

Dr L Harrison Mettler, Chicago The percentage of dementia praecox cases admitted to the asylums throughout the country has been estimated to vary from 15 to 45 This wide variation cannot be satisfactorily accounted for on the basis of a geographic distribution or a difference of diagnostic ability It indicates a fundamental weakness in our conception of dementia praecox. It would be of the highest practical value if we could discover and establish some physical signs by which we could recognize, or assume, a definite pathologic change in these individuals In diagnosing dementia praecox, in all of its forms I find myself leaning more and more on physical results of psychanalysis What is a defective child? Apparent and real defectiveness are often hard to differentiate The distinction may depend on the relative state of the examiner's own intelligence and mental state Suppose a child is a little backward unsocial, selfish, and of a quick temper, may this not have been the result of bad training, environment or social injustice? Ignorance, both gross and subtle, is so widespread, it seems to me that it, more than organic defectiveness, can be invoked to explain in many cases the traits that are being given to us by overenthusiastic investigators as evidences of such defectiveness

Granting that we can, along certain coarse lines, diagnose the defective child, what shall be the mode of its training? Manual training is just now in high vogue for such cases, and for most of them I have no doubt it is the proper thing Manual training, however, is not a panacea or antidote for mental defectiveness I have seen instances in which I thought the recommendation of manual training was evidence of more mental defectiveness in the adviser than in the subject Suppose a child has certain marked and exceptional tendencies of an elementary character along the lines of art, music, literature or mathematics, it is conceivable that such a child might be regarded as a bit defective, and be most unfortunately set to nailing up boxes and constructing peach baskets by a medical examiner whose thinking outside of his profession, scarcely ever went beyond golf and bridge whist In so broad and uncertain a field as the care of the defective child, the physician is liable to find his limitations for making a correct diagnosis and advising a judicious line of treatment more glaringly revealed than in any other branch of his professional work The class of children first referred to should be saved from incompetent and inadequately educated experimenters The harm they will do in squelching a mind that is normal, but not developing along old conventional, humdrum lines, will outweigh the little good they may accomplish with their manual teaching when they do have a defective child to care for

Dr George H Moody, San Antonio, Tex I have observed that it is very difficult to avoid the tendency to blend vaguely feeble mindedness in children with dementia praecox Are we going to allow ourselves to call some of the feeble minded children dementia praecox patients, or is a dementia praecox a distinct disease separate from feeble mindedness? Of course we often see and understand that dementia praecox occurs in children who are constitut nd that the latter superimposed condition hile the original inferiority never can

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[2] Pighini Riv sper di freniat 1908 iii iv 497

[3] Sano Jour de Neurol 1910 Nos 15 16, 17

We are frequently asked for a prognosis in cases of dementia praecox If we are to distinguish dementia praecox from feeble mindedness then we are going to give a different prognosis If we separate the two conditions when they occur in the same individual, which often happens, it seems to me that we can frequently tell the parents that perhaps the child will regain the condition which has been normal for that child, but if the parents expect a child with dementia praecox to overcome its natural mental inferiority as well, provided it be congenitally inferior, and come up to the normal intellectually, physically and every other way, of course we must tell them that it cannot recover It is important to avoid the blending of weak mindedness in children with the beginning of dementia praecox With this strict avoidance there will be a greater percentage of recoveries in our dementia praecox cases

Dr H. A Cotton, Trenton, N J The variation in the number of dementia praecox cases in the various institutions may be ascribed to two factors first, errors in diagnosis, which are liable to occur in any institution in which they are not well acquainted with the disease, second, there is a distinct difference in different localities At Danvers, Mass, we had a pretty large proportion of dementia praecox cases, and I rather favored the diagnosis of manic depressive insanity Still, there were many cases diagnosed as dementia praecox At Trenton, N J, where the persons of foreign descent are much fewer than in Massachusetts—a large proportion of our patients were of Irish descent of first and second generation—we have perhaps the smallest proportion of dementia praecox cases because the locality, the type of population etc, have something to do with it

I agree with what has been said about the necessity for recognizing these other cases, and doing something before the patients come to the institution We have them as they come into the hospital, when they are from 7 to 10 years old, after the onset of the acute stages of the trouble, and I think we are in the same position now with regard to dementia praecox that we were with tuberculosis some years ago, when the physician, having said 'consumption," sounded the death knell of the patient, while to day we know that if the symptoms are discovered early a large proportion of the patients recover So with dementia praecox, when we are able to give symptoms and show conditions which need attention in the early stages, then we will be apt to have more results from the family physician

Dr C B Burr, Flint, Mich I think we should hesitate to exalt into a differential diagnostic sign something which may be present in a variety of nervous conditions or which may depend on transitory, momentary conditions of muscular activity and perhaps on emotional states I have not observed the connection of which Dr Cornell speaks, but, of course, we all recognize cyanosis as an accompaniment of depressed nervous conditions If it is true that we can by a little more attention to cases discover that this is a sign enabling us to differentiate between manic depressive conditions and those of dementia praecox, we shall be deeply indebted to Dr Cornell for bringing the subject to the attention of the Section

Dr. E E Southard, Cambridge, Mass Some years ago I undertook an analysis of anatomic material in dementia praecox To get a list of cases to work with I selected from the autopsy list all cases denominated dementia praecox, and before investigating them anatomically I looked them over clinically to make sure that I had a convincing list I started with sixty three I did not think, however, that I could persuade my professional brethren of the existence of dementia praecox in many of them, and finally I got a selected list of twenty nine, which I thought were really cases of dementia praecox The others were possibly affected by alcohol, or by imbecility, or by the probability of an erroneous diagnosis in the direction of manic depressive insanity, and even in the cases which I finally analyzed anatomically, there were a number of phenomena in the brains which would lead one to think that several of the cases were at least, as we say, on the imbecile basis There were evidences of hypoplasia or congenital alterations in the brain in some of the cases The percentages I have forgotten but the diagnosis was difficult I rather feel as if we could talk concretely about the catatonic form and the hebephrenic form Paranoid forms make up statistics on these forms rather than the total group, and there is a large number of cases allied to dementia praecox

Dr W R Dunton, Jr, Towson, Md. I do not want Dr Neustaedter or any one else to understand that I simply advocate manual training treatment I speak of that as typical of the sensory training which we want to give these patients, and the geographic and social environment and everything else must be considered very strongly A bashful child, I think, needs study to discover the cause of the bashfulness The unsociability of a bashful child is simply a sign, and to my mind those cases should be studied The personality is a strong element Certain physicians will not diagnose cases of dementia praecox unless the dementia is extreme, that is, until the terminal stage is practically reached As for diagnosing the disease in the predementia stage, it never enters their minds If there is a remission (and we all know that remissions occur frequently) they do not believe that the case is dementia praecox—it must be something else (because the patient has recovered!)

I do not agree with Dr Moody about the confusion of feeble minded and dementia praecox cases I think the distinction can ordinarily be made But we must remember that feeble minded persons occasionally have attacks of dementia praecox The cyanosis has always suggested to me a faulty metabolism

"Allied dementia praecox" is an unfortunate term, and the sooner we drop it from our classification the sooner we will come to a more exact understanding of this condition if every one will remember that the cardinal symptom of dementia praecox, the most important thing to bear in mind in case examination, is apathy, the patient's emotional indifference, I think we will come to a definite understanding sooner than if we use the term, "allied dementia praecox "

Dr W B Cornell, Hathorne, Mass Dr Southard spoke of the difficulty of diagnosis and the personal element connected therewith, but every step toward the establishment of definite clinical signs tends to eliminate the personal element and the resulting errors I am inclined to lay considerable importance on the physical findings in this disease Dr Moody asked regarding the occurrence of cyanosis in weak mindedness and if dementia praecox bears any relationship to the latter I think that dementia praecox and imbecility or weak mindedness are quite distinct, but they may be combined, and in such cases cyanosis may be seen frequently I am indebted to Dr Burr for his questioning the value of cyanosis as a symptom in psychiatry Often I have doubted its value myself, but now I really think that it is of importance particularly as a diagnostic sign in cases of acute catatonic excitement in which cyanosis is often quite marked and calls attention to the necessity of circulatory stimulation

I have no data on the occurrence of cyanosis in epileptic cases

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MEDICAL EDUCATION IN SOUTH AMERICA

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Last winter, having contemplated a trip to South America I was appointed by Dr A M Corwin, chairman of the Chicago Medical Society Council Commission on Medical Education of which I am a member, to obtain data regarding the medical schools in the countries which I should visit I also received a similar request from Dr N P Colwell, secretary of the Council on Medical Education of the American Medical Association It is to record briefly my findings in this direction, as far as I could obtain knowledge of the facts on a hurried visit, that this article is written

I left New York Jan 20, 1912, and arrived at Buenos Aires during the height of the Argentine summer, when the colleges were all closed and many of the faculty members away on their vacations The weather was sweltering, but I was able to find well-informed physicians and through Spanish and Portuguese interpreters obtain information

I was received with great courtesy by our Southern colleagues, who made every effort to show me their hospitals and schools and to give me all the information that I asked for They demonstrated that the proverbial reputation of our neighbors of the Latin-American countries for hospitality and courteousness is well founded

I visited the schools and hospitals of Brazil Uruguay, Argentina and Chili, and was told about the medical schools of the other countries of South America that I did not visit

The medical department of the state university at Buenos Aires is the best school in South America and will compare favorably with any school on this continent or in Europe The city of Buenos Aires is thoroughly cosmopolitan, having 1,350,000 inhabitants and a history dating from the sixteenth century It is well to remember that the oldest civilization of Europeon origin in the western hemisphere is Latin, and that many cities to our south antedate the oldest in the United States

The medical university at Bahia is the oldest and one of the most noted institutions in Brazil, having been established by Regent Don João, who visited Bahia in 1808 It will be remembered that the first medical school in the United States was the one at Philadelphia founded by Dr John Morgan in 1765 The personal physician of the royal family founded the institution at Bahia, which was called the Collegeo Medico-Chirurgico, the first lectures being delivered in the military hospital of Bahia In 1832 it was installed in a suitable edifice of its own and the course of studies was enlarged It was not until 1882, however, that it became known as one of the best medical institutions in South America During that year it was completely reorganized by the emperor Seven new chairs were created, making the whole number twenty-six New laboratories were opened, and medical and surgical training was improved In 1901 a chair of bacteriology was created and an experimental laboratory established in this department.

The curriculum is divided into twelve sections, embracing all branches of medicine, and the course of studies extends over six years, special attention being paid to clinical teaching which is given in the Misericordia and other hospitals as well as in the clinical institute of the faculty, which is comparable to our own dispensaries The building for this work is lighted by electricity and equipped with many modern conveniences This is the smaller of the two medical schools of Brazil The charitable institutions of Bahia, in which the students receive their clinical training, are governed by the central board of health which has charge of the hospitals, the disinfection department the city service and the vaccine institute

The other medical college of Brazil is located at Rio de Janeiro and, though younger, is much larger It also has a six-year course and has about 1,000 medical students The population of this city is 850,000 The students of both of these colleges have the privilege of attending either of them in any department Both institutions are under government patronage, but are subject to proprietary control of the faculty which regulates the curriculum The salaries of the older professors are still paid by the government, but the newly appointed professors are remunerated from the income of the school itself

Up to one year ago the grade of both these institutions was decidedly low as compared with our own standards or those in other parts of South America, but within this period a thorough reorganization has been effected on the lines of the medical universities of Germany

The government, in addition to salary appropriations, allows a considerable sum yearly toward the running expenses As an entrance requirement all students must know Portuguese, their own language, and in addition any two foreign languages, the preference being given to French and German The lectures are delivered in Portuguese, but most of the text-books are of French and German authorship French is preferred by the students

The medical course is of eight months' duration, from April 1 to December 1 Formerly examinations for degrees were written, but of late all tests are oral, each student being required to discourse for fifteen minutes before the examining board These innovations seem to prevail in all the colleges of South America, and the reason given is that under the written system "cribbing" could not be controlled

The resident surgeon of the state hospital (which is similar to our Cook County Hospital) is paid by the government, his assistants receive part pay from the same source and the remainder from the medical faculty It should be said in justice to the Brazilian medical schools that though they have been of low grade compared to those in Argentina, Uruguay and Chili and the average in our own country, they are now endeavoring to place themselves on a par with the best in South America in equipment, buildings and requirements

In passing from tropical Rio de Janeiro to temperate Argentina we find a radical change for the better in the status of medical education and practice There are two schools in the latter country, *one at Cordova and one at Buenos Aires, both under national control and* management The proprietary school, therefore is unknown and not allowed There are at least from 1 500 to 2 000 students in the medical department of Buenos Aires University The admission requirement is a secondary school diploma, the medical course *extends over seven years, the curriculum being thoroughly* graded for each year The examinations are all oral, and no thesis is necessary There are thirty-two examinations of half an hour each before a commission of three professors appointed by the dean The examinations are severe and must be passed in the Spanish language They take place twice a year, the first for all students and the second for those who did not pass, third, there is a special examination for foreigners, who must present a diploma from their own country viséed by some home authority and by the local Argentine representative from the home country After this they are admitted to examination, and must pass all the studies included in the curriculum of the seven years, all the examinations are held in Spanish The fee for examination is $1,000, Argentine money, I think It is perhaps worthy of note that foreigners are permitted to practice in rural districts provided there are no local Argentine physicians, but permission must be secured from the board of health to practice This is evidently to enco[illegible] l practitioners in [illegible] outlying district[illegible] ol[illegible] handsom[illegible] are to be had [illegible] at c[illegible] examiners [illegible] ernment

The profession is not so overcrowded as it is in the United States, though I was unable to secure statistics on this point. French text-books are used and some German, but no English. The English language is not spoken or understood. The text-books in surgery are in French.

There are two rival medical societies in Buenos Aires. There is no characteristic student life, and no medical clubs or fraternities exist. Drinking and dueling among students are unknown. There seems to be a distinct antagonism between Argentine and foreign practitioners, notwithstanding the notable courtesy extended to me.

All interns are chosen from the best among the sixth and seventh year students. The professors are appointed by the minister of education, but as a rule are recommended by the faculty. All are paid for their services.

A good many students finish their education in Paris or Berlin. There are no postgraduate schools in Argentina. The government annually sends certain students to Europe at government expense and I think only one has been sent to the United States recently. American colleges might do well to cultivate this field, not only to bring to the attention of South Americans the superior work done in the United States, but to stimulate better international intercourse between the various Latin-American countries and our own. The late Nicholas Senn did much to encourage Japanese medical students seeking medical education to direct their travels from France and Germany to our own shores. Had he lived it is safe to say that the largest percentage of these would have been in American schools to-day.

I well remember that when I was on my trip around the world with him, about ten years ago, a banquet was given in his honor at Tokio by the government. On a side table was a collection of all the works which were the product of his active and virile pen. The honors accorded him and the attentions shown him were princely, and the eulogies pronounced to his fame as surgeon and teacher far surpassed anything that I have ever listened to.

In response, he dwelt forcibly and at length on the advantage to be gained by Japanese medical students in coming to our country. With him this was a sacred conviction born of his national pride. It would have done your hearts good to listen to the patriotic spirit which he voiced that evening. If to-day we had others of his kind, the United States would soon be the Mecca of our Southern, as well as of our Western neighbors across the seas.

To return to the school at Buenos Aires: the buildings are large, spacious, well lighted and richly equipped with all the modern appliances for comfort and superior work. They are well stocked with apparatus of every description, scrupulously clean and in order, and are patterned after the best in Europe. Laboratories, departments for the specialties, dissecting-rooms, etc., are prodigally planned and lavishly equipped. Good use is evidently made of it all, though I cannot vouch for this because it was in the vacation season when I visited them.

The reason that they can do these things on so great a scale is the government control and the large sums of money that are received for this purpose from race-courses and lotteries which are sanctioned by the government and universally patronized.

Buenos Aires contains hospitals aggregating about 5,000 beds freely accessible to all medical students of the fifth, sixth and seventh years; here the students receive their clinical training.

The other medical school of Argentina is located at Cordova. It is much smaller than the one at Buenos Aires, but the requirements, government control and management are similar. There are no proprietary medical colleges in Argentina. In Uruguay and Chili the system of medical education is substantially like that in Argentina, but in Paraguay, I was informed, medical training is bad.

Venezuela has two medical colleges, one located at Caracas and one in Ciudad Bolivar, the former having only forty or fifty medical students, the latter twenty-five or thirty. The course of medical instruction in these institutions extends over a period of three years. Both faculties are small and inefficient and their curriculums and requirements are far below par. The oldest hospital in South America is the Misericordia at Caracas governed by the Sisters of Charity.

Boys of 16 and 18 years of age are allowed to study medicine in Venezuela. In spite of this evident lack of preliminary education many of them I am told are wonderfully keen, have analytical minds and grasp ideas readily; they can converse on medical affairs fluently and intelligently but do not tend to carry out in practice what they learn.

Cadavers in Venezuela are not preserved as with us. Fresh subjects are taken and worked with as quickly as possible in order that they may be disposed of the same day. This is done because of the heat and moisture of the atmosphere which rapidly disintegrates the bodies. Subjects are numerous and easily procured, as all deceased indigents are turned over to the dissecting-rooms if wanted.

Caracas is a city of 100,000 inhabitants and contains only about 100 physicians. There is a need of good physicians in Venezuela. The native physicians are not prosperous because of the custom among them of allowing patients to pay whatever they wish. Foreign practitioners make specific charges and the people have more faith in them and look up to them as being more highly educated. There is no state medical association, but local societies exist as with us. Suits for malpractice are unheard of among these natives. It is ethical for physicians to advertise in the daily press and give testimonials for patent medicines.

There is a leper hospital of 400 beds in Caracas. The patients go and come as they please. Twice weekly those who are able go about and can be seen begging in the streets. On market days it is a common sight to see them vending vegetables.

A law exists in Venezuela against unlicensed practitioners. Non-graduates can procure licenses on examination but must practice in the rural districts, where they are numerous. Birth-certificates are not compulsory, but death-certificates are. Indian doctors are allowed to practice as they choose and the law does not interfere with them. Love potions to bring lovers together are common prescriptions, and strange to say, as in America, these fakers are patronized by some of the best families.

Generally speaking, in South America schools for nurses are wanting, and, while the Sisters are very charitable, they lack efficient training in the up-to-date, modern, scientific care of the sick. Male patients are universally attended by male orderlies. I was impressed with the fact that everywhere hospital accommodations are below requirements. I saw in almost all the state hospitals many patients lying on the floors, so manifest was the overcrowding The good sanitary condition, however, which has been established in the sea-coast cities within the past five or six years, is in notable contrast to the former state when the cities were recognized pest-holes These reforms are in large measure due to the fact that medical men are at the head of many South American municipalities For example, the major of Rio Janeiro is a physician, and is proud of the sanitary measures which he has inaugurated in that city Well may he be, for it is one of the cleanest cities that I have ever visited

In conclusion I may suggest that the holding by American physicians of the offices of mayor, alderman, governor and other executive positions is needed to place us on a par with members of our profession in other parts of the world where they are in the van of progress as leaders in politics, and in economic and social affairs It is for this leadership that our higher medical standards and training fit us

32 North State Street

A SERIES OF INFANTS FED ON A HIGH-PERCENTAGE ALBUMIN MILK *

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The work of Finkelstein and his school in the use of *Eiweiss-Milch* in the nutritional disorders of infancy is now too well known to need narration Many of you have seen this food used at the Berlin Kinderasyl or elsewhere, many personally have tried it, and all have read the growing literature on the subject That it has a temporary value in selected cases is accepted by most observers That the dyspeptic stools improve and that with the addition of malt sugar the infants begin to gain in weight is the experience in most cases

It is my purpose in this paper to record observations on the administration of a milk which is prepared according to the method of Finkelstein but in which the whey-elements have been increased beyond those of the regular albumin milk The food which I have used is therefore *richer in proteids, sugar and salts* This has been attained by using all buttermilk as the diluent for the curds instead of half buttermilk and half water

The analysis of Finkelstein's albumin milk as published throughout the literature gives the following percentages

Fat	2.50 per cent
Albumin	3 00 per cent.
Sugar	1 50 per cent
Salts	0 50 per cent

It represents the fat and casein from 1 liter of full milk, casein, sugar and salts from ½ liter of buttermilk and water, ½ liter

Some have failed to add a half liter of diluent, and as a result there are only 32 ounces of a milk mixture as the finished product, which increases the percentage and caloric content quite materially The curds from 1 liter of sweet milk add about 250 c c or 8 ounces by volume to the liter of buttermilk and water, making 1,250 c c or roughly 40 ounces

Percentages vary in such a complex milk, the ingredients of which are obtained from so many different sources The fat, proteid and sugar content of both sweetmilk and buttermilk is not constant, while not always is the same amount of curd precipitated, due to variations in the pepsin, the temperature and the time Several analyses have been made for me by reliable chemists[1] The composition varies widely, which coincides with the findings of Birk[2]

The milk which I have used in the cases reported I have designated "high-percentage albumin milk" The analysis from one specimen gave

Fat	2 00 per cent
Protein	3 31 per cent
Carbohydrate	0 51 per cent
Ash	0 90 per cent

Other analyses did not give so high carbohydrate, but the fat has tested as high as 2 9 per cent and the protein 5 per cent Therefore, I have found it impossible to state a uniform percentage Likewise, the caloric estimation must vary somewhat, but the above analysis gives 18 3 calories per ounce, and 585 for 32 ounces This is an average caloric content for the different analyses that have been made The composition of high-percentage albumin milk is as follows Fat and casein from 1 quart full milk Casein, sugar and salts from 1 quart buttermilk No water added[3]

This formula, then, makes a total of 40 ounces, and is made up of a quart of churned artificial buttermilk made with a lactic acid ferment, reenforced by the addition of the precipitated fat and casein from a quart of sweet milk

The primary object was to obtain a milk that could be used in the transition from Finkelstein's formula or from buttermilk It has a higher salt-, sugar-, casein- and caloric-content than *Eiweiss-Milch*

Malt sugar, cane-sugar or flour have in certain cases been added in from 1 to 4 per cent This corresponds with the recent work[4] done by Finkelstein's pupils in Berlin

The infants to whom this mixture was fed and all of whom up to this time are reported herein were under 6 months of age at the time the feeding was begun, ranging from 22 days to 5½ months All were inmates since birth in the institution and had been continuously observed Many of them had not gained on breast-milk, and none of them had gained on sweet milk All of them had shown stationary weight, most of them had had undigested stools, and many had various degrees of atrophy

REPORT OF CASES

Case 1 —Baby Ar, weighing 3,920 gm at birth on Sept 14, 1911, had not regained birth weight at the end of two weeks when he had to be taken off the breast The next ten days showed a rapid fall in weight and dyspeptic stools while being fed a simple sweet milk dilution with sugar addition When the child was 24 days old he was put on Finkelstein's *Eiweiss Milch* for ten days, the stools were still somewhat green and undigested, the weight remaining stationary at 3,110 gm, which was 800 gm less than the birth weight At the age of 34 days the food was changed to the high percentage albumin milk The infant gained 830 gm in the next twenty six days Then followed a period of a month during half of which time sugars were added without any gain at all, the stools for the most of the time being macroscopically good.

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City June 1912.

[1] Analyses of buttermilk *Eiweiss Milch* and high percentage albumin milk have been made for me on different occasions by the Kansas City municipal la[illegible]tory a[illegible] the Kansas City testing laboratory

[2] Birk Monatschr [illegible] 140

[3] The technic of [illegible] loyed by Fink[illegible]

[4] Renfrey J[illegible] 12 The au[illegible] that the sugar add[illegible] 3 per c[illegible] go up to 6 7 or 8 [illegible]od

At the beginning of the infant's fourth month at first 1 per cent and later 2 per cent cane sugar was added, with a subsequent gain of 800 gm in the next twenty four days It was then thought that the child could safely be put on a sweet milk mixture, but he began to lose and to develop green stools Buttermilk with cane sugar caused a temporary slight gain, the temperature being normal but constipation marked February 24, when the child was 5 months old, the high percentage albumin milk without sugar addition was again begun and during the ensuing month the gain in weight was 1,000 gm, the stools and temperature being normal The child at this time left the institution in good health

CASE 2—Baby Wi, weighing 2,845 gm at birth on Sept 26 1911, nursed for two weeks at the end of which he weighed 3 005 gm, after which he was fed on various cow's milk formulas until November 21, maintaining a stationary weight From November 21 to December 3, he was fed Finkelstein's *Eiweiss Milch* with no gain The stools were somewhat constipated December 3, the infant was put on high percentage albumin milk, gaining about 500 gm in seven days The weight was then stationary for twelve days when 1 per cent cane sugar was added, the child gained slowly but constantly January 11, 2 per cent malt extract was substituted for the cane sugar, the weight increasing in the next twenty seven days from 3,865 to 4,705, nearly a kilogram, when the child left the institution The stools during this period were from one to four daily and of normal consistence usually, the temperature and general condition were good. Thus this infant was fed for two months on a high percentage albumin milk, gaining both before and after the addition of sugar for a total of 1,750 gm

CASE 3—Baby Ol, weighing 3,917 gm at birth on June 28 1911, nursed for twelve days with an initial loss of 400 gm at the twelfth day, he was then fed on various cow's milk mixtures until he was 5½ months old at which time he weighed only 3,740 gm The first four months of life the infant had frequently dyspeptic stools and showed marked atrophy A moderate gain on buttermilk with cereal addition occurred from the 4th to 5½ months, at which time was begun the high percentage albumin milk without sugar addition For the following three weeks there was a gain of 620 gm Then 1 5 per cent malt extract was added, the infant going from 4 280 gm to 5 700 gm in the following two months, the weight remaining here for two weeks when a change to malt soup was made During this time a double infantile glaucoma appeared, but the child continued to gain slowly

CASE 4—Baby Te, weighing 3,310 gm at birth on Oct 10, 1911, nursed for two weeks at the end of which time the weight was 400 gm below the birth weight. For the next two weeks the patient was fed on a simple sweet milk dilution and lost weight, had dyspeptic stools but a normal temperature During the second and third months of the child's life there was a slight gain on buttermilk with cane sugar, the stools remaining bad and the temperature normal At the age of 2½ months the food was changed to Finkelstein's *Eiweiss Milch* for two weeks with improvement in stools but none in weight Jan 11 1912, when the infant was 3 months old the high percentage albumin milk was begun The weight was only 3 387 gm Malt extract 1 per cent was added and the infant gained 700 gm in the next thirty days, the stools for the most of the time being in good condition

CASE 5—Baby Al, weighing at birth 2 720 gm on Oct 30 1911 was fed from the start on a sweet milk mixture with no initial loss of weight but at the end of the first month weighed 200 gm less than at birth The stools had been irregular, some days showing curds and constipation, but in good condition at the time of beginning high percentage albumin milk on the thirty sixth day of life There was an immediate gain of 300 gm in five days, after which the weight remained stationary and the stools and temperature normal No further attempt was made with this food.

CASE 6—Baby Har weighing 4 000 gm at birth on Oct 31 1911 nursed sixteen days was still 100 gm below initial weight continued to lose weight for the next three weeks on a sweet milk formula. Temperature was normal and stools

RESULTS OF FEEDING HIGH PERCENTAGE ALBUMIN MILK IN SIXTEEN INFANTS WITH STATIONARY WEIGHT AND VARIOUS DEGREES OF ATROPHY

Number	Name	Birth Weight Gm	Age (Days) at Time This Food Was Begun	Time (Days) on This Food	Weight (Gm) at Beginning	Weight at End	Total Gain	Carbohydrate		Stools Before Using	Stools During Using	Temperature	General Results	Outcome of Case
								Day When Added	Kind (Percentage)					
1	• Ar	3 020	34	75	3 120	6 210	3 090	34	Cane 1 5	Dyspep	Digest	Normal	Good	Left institution normal
2	Wi	2 845	67	68	3 045	4 705	1 750	10	Cane 1 5 later malt	Green mucus	Yellow digest	Normal	Good	Left institution normal
3	Ol	3 017	160	102	3 660	5 725	2 065	22	Malt 2	Good	Good	Normal	Good	Developed infantile glaucoma
4	Te	3 310	88	38	3 387	4 065	678	8	Malt 1	Loose green	Usually good	Normal	Good	Left institution normal
5	Al	2 720	37	15	2 615	2 970	355			Constip	Constip	Normal	Fair	Gained slowly on malt soup
6	Ha	4 000	50	22	4 052	4 400	348	5	Cane 1	Good	Digest	Normal	Fair	Gained slowly on malt soup
7	Sh	4 045	34	7	3 825	3 800	—25			Green	2 to 4 dyspep	Normal	Poor	Stools became normal when food was changed to malt soup
8	Ha	2 800	26	30	3 074	3 240	166	14	Dex malt 2 5	Constip	Constip	Normal	Poor	Stools became normal later on malt soup
9	Wa	3 091	22	22	3 795	3 880	85	5	Cane 1	Green	Good	Normal	Poor	Left institution
10	Ma	3 350	98	21	3,700	4 002	302	4	Malt 2 5	Loose yellow	Good	Normal	Good	Developed spinal postural deformity
11	Ca	2 572	50	48	2 530	3 450	920	10	Cane 2 5 later malt	Dyspep	Constip	Subnormal	Good	Left institution in good condition
12	Wik	3 072	54	28	3 072	3 845	773	4	Malt 2 5	Irregular	Loose yellow	Normal	Good	Left institution normal
13	As	4 245	30	14	3 640	3 574	—66	3	Malt 4	Dyspep	Good	Subnormal	Malnutrition	Later gained on cereal
14	Da	3 405	40	9	3 310	3 415	105	7	Dex malt 4	Digest	Loose	Normal	Good	Put on sweet milk
15	Le	3 560	27	43	3 398	4 315	917	7	Malt 4	Constip	Good	Normal	Good	Put on sweet milk
16	Gr	3 405	30	35	3 020	348	328	5	Malt 4	Dyspep	Good	Normal	Good	Continued good.

good December 6, weight was 3,030 gm, but a change to buttermilk caused a gain of 500 gm in 8 days, when weight remained stationary for a week High percentage albumin milk with 1 per cent cane sugar was then fed for ten days with a gain of nearly 500 gm, again a stationary weight for five days when a sweet milk formula was begun

Case 7—Baby Sh, large infant with stationary weight at 1 month of age was given high percentage albumin milk for one week without any gain During this period the infant had a nasal discharge, stools were somewhat dyspeptic, temperature between 99 and 100 F, which became normal by the time this food was stopped

Case 8—Baby Ha, aged 2½ months Feb 2, 1911, who has gained only 300 gm since birth, gained about 200 gm in the next twelve days on high percentage albumin milk, but remained stationary for the following eight days when dextri maltose was added Bowels became constipated but temperature was normal

Case 9—Baby Wa, aged 3 weeks, weight 3,795 gm, stools loose, green, but only two daily, was fed for eleven days on high percentage albumin milk with complete improvement in the stools, but a gain of only 200 gm in weight when 1 per cent cane sugar was added

Case 10—Baby Ma, aged 3½ months on March 31, 1911, weighed about 400 gm above birth weight, stools were usually loose and yellow There were evidences of moderate amount of malnutrition The child gained 400 gm in twelve days at which time he left the institution To this infant's food was added 3 per cent. malt extract The stools remained loose but good in color and frequency

Case 11—Baby Ca weighed at first month 2,530 gm, (5¾ pounds) no increase over the initial weight, although the infant was part of this time on the breast, the stools were dyspeptic and the temperature was usually subnormal He had showed a slight gain for two weeks previously on Finkelstein's formula with an occasional breast feeding A change to the high percentage formula without sugar caused no gain for the next week, but when malt extract was added a gain of 1,000 gm in the next month and one half was noted.

Case 12—Baby Wil, aged 53 days, weight 3,072 gm, had not gained since birth, there was marked constipation in spite of daily administration of olive oil, and the addition of dextri maltose to the milk Food was changed to high percentage albumin milk with from 2.5 to 5 per cent malt extract added the patient gaining 800 gm in the following twenty seven days, general condition was good

Case 13—Baby As, 1 month old, had been feed on various cow's milk mixtures with decreasing weight, with loose and undigested stools Weight at this time was 600 gm below birth weight From 1 month to 6 weeks of age, the high percentage albumin milk, with malt extract addition up to a total of 8 per cent, caused a marked improvement in stools, but a slight loss in weight Child continued to be atrophic

Case 14—Baby Da, 1 month old, stationary weight since birth, temperature normal, stools good, was fed for ten days on high percentage albumin milk with only slight gain, but maintained good stools

Case 15—Baby Le, weight at birth 3,560 gm on Feb 16, 1911, was fed from the start on a low fat and high sugar formula until twenty seven days old, with a slight loss in weight, when the high percentage albumin milk with 4 per cent of malt extract was begun The patient gained 800 gm in the next twenty eight days, the stools and tempera [illegible] ere normal

[illegible] 16—Baby Gr, 1 month old, had lost 400 gm since [illegible] l had dyspeptic stools When put on the high percentage [illegible] ilk with malt extract, 4 per cent., the patient gained [illegible] he next month, and continued to gain while in the

RESULTS

[illegible] igh percentage in this buttermilk mix- [illegible] using has been easily tolerated as [illegible] iformly good stools, frequent gain [illegible] of fever is hard to say, but the [illegible] creased digestibility from the presence of buttermilk and from the freedom of over-feeding by caloric control, while at the same time the infant is getting sufficient Heim and John, however, at Budapest, have recently reported good results from the use of a casein-enriched sweet milk[5]

Nine of the sixteen patients showed good gain in weight, a few of these being quite marked

Two showed loss and two only slight gain One of the former was the most atrophic in the series, In all of the cases the good effect on dyspeptic stools occurred Three infants remained constipated

As long as the infant continued to gain it was kept on this food Some gained with or without addition of sugar

3609 Baltimore Street

ABSTRACT OF DISCUSSION

Dr J H Hess, Chicago Unquestionably, catharsis gives us a great deal of aid in eliminating from the bowels, and, if proper cathartics are used, also from the kidneys, in all intoxications, especially those due to intestinal absorption I believe however, that there is danger of going too far I have never had the courage to give 6 grains of calomel to a young infant Not many months ago a series of experiments was carried on by Dr Abt in our clinic at Michael Reese Hospital to note the effect of the various cathartics in infants and young children We found in all infants that 1 grain of calomel given daily in divided doses over a period of three days produced at least microscopic blood in the stools The same thing was found when 1 dram of magnesium sulphate was given daily over a period of three days, and also but to a lesser degree when 1 dram of castor oil was given daily for three days Inasmuch as some of the patients were normal babies, sent to us for feeding because the mothers were sick, these findings were particularly striking I recall one well baby that was given 1 grain of calomel daily for two days It had no ailment of any kind, but we almost lost it It was several weeks before the baby was considered out of danger Undoubtedly, areas are opened in the intestinal tract, and infection takes place through them

I believe that one great trouble in this country is that most of us do not know how to make *Eiweiss Milch* Finkelstein did not give details for its preparation sufficient for use in the home or in the small clinic His was made by a large manufacturer with large equipment especially designed for a homogeneous mixture, and without these when making it in our clinic we do not get a fine curd As a consequence it does not go through the bottle, or we make an error in another direction and do not feed enough carbohydrate with it Since we have been making it according to later instructions our results have been entirely different When Dr Neff says that with the *Eiweiss Milch* he got no gain but with the higher percentage food he did, I think it was simply due to the fact that he did not follow Finklestein's dictum if you do not get a gain in weight add more malt sugar Dr Neff says that Finkelstein directs the addition of "one half liter of water and one half liter of buttermilk" What Finkelstein really says is "add one half liter of buttermilk and water to a full liter" So in my experience you only add about 6 ounces of water and not 16

Dr J L Morse, Boston We are now in a transition stage as to the question of etiology of diseases of the intestinal tract and therefore as to their classification The Germans are making at present a little too much of the chemical side We in Boston are perhaps thinking a little too much of the bacteriologic side, the truth may lie somewhere between I think almost everybody now feels that a baby from birth up even a premature baby, is able to digest a reasonable amount of starch, in many instances it is a great advantage to add it There is no reason to expect any harm to come from the addition of a reasonable amount of starch, whether dextrinized or not I read a paper last week on maltose in infant feeding in which I maintained that lactose was the best sugar for the normal baby It seems to me that one of the greatest things we owe to Finkelstein and his school is his calling attention to the injury sugar may do in the intestinal tracts of babies, especially milk sugar, and to the substitution of malt sugar for milk sugar in the later treatment When I speak of malt sugar, of course I mean the various preparations of dextrin and maltose, because nobody uses pure malt sugar A large number of intestinal disturbances in infants are due to the fermentation of sugar and its chemical action on the intestine These patients are relieved by cutting down the sugar to a minimum and feeding a high protein diet, but they improve more rapidly if malto dextrin mixtures are added instead of lactose I do not feel quite sure, from my experience whether precipitated casein as used in the *Eiweiss Milch* has any advantage over the straight casein I am sure that a high percentage of protein is of advantage We have to remember not only the chemistry but also the bacteriology of the intestinal tract Lactose is of advantage in some instances because it is slowly absorbed and maltose is of advantage in other cases because it is rapidly absorbed Then also lactose favors the growth of the *Bacillus bifidus*, a normal inhabitant of the lower intestine, while maltose favors the development of the *Bacillus acidophilus*, which may do harm In making Finkelstein's *Eiweiss Milch* it seems rather inconsistent carefully to take out lactose, which, if it does harm, presumably does so by the formation of lactic acid in the intestinal tract among other things, and then add buttermilk, which is full of lactic acid

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[5] Heim P., and John K M. Ztschr f. Kinderh, Orig., March 1912 1 Series 4

We have found, in Boston, a certain number of cases which were undoubtedly meningismus, in which there was increase in the number of mononuclear cells in the spinal fluid, enough to lead to suspicion of tuberculous meningitis Subsequently, this was disproved It seems to me that a further knowledge is going to modify materially our judgment regarding the cellular findings in cerebrospinal fluid

Dr L T Royster Norfolk We should differentiate between the institutional case and that in private practice There are two main reasons why we have had a large number of deaths in institution practice first, lack of attention, I mean by that, insufficient help With ten bottle fed babies to one nurse, it is simply impossible to give them adequate attention The other is lack of ventilation and fresh air I have charge of a small institution for foundlings in my city, children who are abandoned from the slums of the city The children that have come into the institution have usually been doped to such an extent that a bowel movement is impossible for four or five days and they are practically starved We found that we were not doing quite enough in the matter of attention to these babies and we have our ward open all around to get as much fresh air as possible There is one graduate nurse in charge, and a student nurse from each of the two general hospitals and two ward helpers As nearly as possible I feel that that is giving the children just as good care as is possible in an institution Babies that are at all sick or young bottle fed babies are invariably held in the arms while they are nursed Personal care of each individual baby and plenty of fresh air are a great help

For the past winter in some select cases I have been using a preparation of malt sugar after a formula devised by Dr Leopold of New York I have obtained some interesting results from that I had two babies that were almost completely starved had almost complete obstipation, having been doped, and weighed almost nothing at 2 or 3 months They gained somewhat in weight, but did not reach normal, and stopped. The stools so far as I could see were normal, the baby was taking the requisite amount of food. The only change I made was to substitute dextrimaltose for whatever form of milk I was using One baby gained 11 ounces and the other 7 or 8 in the first week and kept up an average of 6 to 8 ounces a week for six weeks Then I took a small series of babies in a somewhat similar condition, as nearly as you can compare two or three babies and used them as an experiment, one was fed with one of the proprietary foods said to be especially rich in malt sugar, the second on milk-sugar and the other on dextrimaltose In that particular series the child on the proprietary food gained about 3 ounces a week, the child on the milk sugar gained about 5 to 6 ounces a week, and the child on malt sugar gained about 6 ounces a week I do not think it wise to keep the child on malt sugar indefinitely There comes a time when the child will stop gaining In many cases the slightest change in the child's food, even putting in a tiny little bit of starch, or as one investigator found, just a little condiment, would start a digestive improvement

Dr Herman Schwarz, New York It has been proved that the addition of malt sugar in a great many cases does help the children Finkelstein, if he has done anything, has shown the difference between the normal and the abnormal child as regards sugars, and that is one of the most important points we fail to recognize, that when we are talking of sugar preparations in infant feeding, we should distinguish between the normal and the abnormal child For abnormal children milk sugar is not the best. For the normal child it may possibly be all right I began about three years ago to use *Eiweiss Milch*, and it is used extensively in New York I wanted to find out whether it was the high protein, the absorption of sugar or simply the breaking up of the coagulum which caused fermentation I gave children *Eiweiss Milch* and then washed out the stomach, and the returned coagulum was about the same It seems to me that the results secured with *Eiweiss Milch* are due to the high percentage of protein It is not how much you give of any one component part of a food, but the combination I can give a child a high fat, providing I give a low sugar I can give a high sugar providing I give a low fat

Dr F S Southworth, New York The old idea that the child could not digest preparations of starch in its first year has been thoroughly cleared away by experimentation Many of us are in the habit of using the preparations of starch I do not think it is necessary as a routine measure, often using lime-water and plain water, but where there has been intestinal disturbance, children often do better on an admixture of a cereal diluent The original view taken of this matter was that the addition of the cereal diluent made a looser curd of the casein, and therefore made it more permeable by the gastric and intestinal juices, but it seems to me that there is another use for the polysaccharid carbohydrates We know that when Keller put out his "malt soup," he found that if he gave large quantities of the malt soup extract alone there was too much sugar and the child got diarrhea He was obliged to add starch to prevent this

It is my opinion that the starch when given acts to a certain extent in protecting against fatty acids as well as against the irritant effects of sugars, which is a further reason why I think the addition of cereal diluents helps us Of the three sugars, lactose saccharose and malt sugar, the lactose and saccharose are simply disaccharids, but the other which we use under the term "malt sugar" is really a combination of more or less of the two ingredients, maltose and dextrins We managed to get along for a good many years, disregarding the presence of these dextrins We made no particular study of their action Dextrin and starch have certain things in common Dextrin is apparently able to protect the intestine in very much the same way starch does The dextrin is capable of being further split up in the intestine into maltose If we give part of our sugar in the form of maltose and part in the form of dextrin, which is not fermentable or dialyzable and consequently not so readily absorbed and not so irritating, the latter can be slowly split in the intestine, and furnish further maltose during the time of its gradual absorption

Dr H Lowenburg, Philadelphia The papers bring up the subject of the relation of the laboratory worker to the physician I must confess that I am at times completely mystified by advice from the laboratory, it is so frequently contrary to clinical experience and contradicts itself About eight or nine years ago I heard a paper by a laboratory worker before the Section on the etiology of marasmus, in which the author said that the cure of marasmus consisted in finding the proper food I also remember another paper before this Section dealing with the etiology of summer diarrhea in which some very eminent authority described the etiologic factor as largely bacteriologic The Germans deny this For many years we were taught to look on the protein as the source of our trouble, and then the laboratory worker came along and told us it was not the protein but the fat and the sugar While I look to the laboratory for advice, I must confess that I have to be shown before I am willing to accept every new idea. In the last few years I have been feeding top milk mixture with cane sugar I see no reason to discontinue, my experience having been successful During June, July, August and September I pasteurize and try to get a mixture suitable to the child's digestion I believe that if we combine chemical and bacteriologic study in our search for a proper etiology of digestive troubles, we shall probably reach the correct solution of the whole problem I have never been able to understand why milk sugar should be the cause of so many digestive disturbances for which at the present time it is given credit, for the simple reason that it is a natural ingredient of human milk, in which it is present in a large amount The only reason I can advance is that the commercial product might be impure, contaminated with bacteriologic products, which are not properly destroyed by sterilization

Dr Roger H Dennett, New York Dr Schwarz spoke of having much better success with the malt soup than with the dextrimaltose I believe that that is because the malt soup requires superheating of the milk in its preparation It has been my experience, time after time, that some children cannot take milk that has not been superheated If you take them off the superheated milk they immediately develop intestinal indigestion

Dr Louis Fischer, New York I do not wish to be misunderstood that I ordered this dose of calomel for a child of a year I was talking about children in the Willard Hospital aged from 7 to 9 I am willing to admit that calomel might do harm I did say that the choice of active catharsis was left between magnesium sulphate, Rochelle salt and compound licorice powder In giving a dose of magnesium sulphate the house staff has a routine method of giving 2, 3 and sometimes 4 drams at one dose on admission, especially when there is a tendency to constipation In comparing a series of cases in the last ten years in which we allowed intestinal auto intoxication to occur we had more complications later in the disease I therefore wish to make one point we should have free elimination of the gastro intestinal tract, not necessarily with enormous doses of calomel or anything else, but with free stimulation of the emunctories of the body This would result in less complication, and perhaps shorten the duration of the disease

Dr. F C Neff, Kansas City Mo In answer to Dr Hess's question about the probability of some of the patients gaining if malt sugar had been added a complete analysis of the cases will be printed, in which I show how much sugar was added, and when Some did not gain at all until malt was added I had a few patients who did well without any sugar I wish to repeat that my object in presenting this series of cases was to show the results in feeding a milk which is undoubtedly indicated in certain patients, who are in certain degrees of atrophy The milder ones might be said to have a persistent stationary weight We had to find some food which was suitable. I believe some of these foods are better in these cases than the ordinary sweet milk mixtures I simply offer a suggestion for trial in certain cases in which other foods do not show a gain

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Roast Beef and Hot Water in Exophthalmic Goiter—In my own experience, patients with pulmonary tuberculosis or intestinal tuberculosis do best on a diet consisting largely of raw or underdone broiled or roast beef and hot water, and I have found the same régime useful in many cases of Graves' disorder The hot water is sufficiently important to be emphasized by repetition Given regularly and in sufficient amount, i e, from 250 to 500 c c (*one or two tumblerfuls*) and preferably the larger quantity, about an hour before food four times daily, and between meals also, *ad libitum*, it keeps the gastro enteric tract clean and active, and it promotes elimination by the skin, the bowel and the kidneys Thus it permits a sufficient quantity of beef to be eaten, digested and assimilated, and causes the waste products to be excreted thoroughly —Cohen in *Am Jour Med Sc*

RELATION OF THE INFANT WELFARE MOVEMENT TO PEDIATRICS *

THOMAS B COOLEY, M D

DETROIT

We hear constantly nowadays that this is the era of preventive medicine, and the saying daily becomes more true The physician is ever more concerned with warding off the ills which once he aimed merely to palliate or cure As our science has grown, means have been made clear to us whereby the great scourges of humanity might be attacked at the root, and one by one they are being met and conquered Certain of these evils have been so wide-spread and so obvious that as soon as ways of mitigating them became apparent, the attack was readily converted into a popular movement or crusade of which there are several now in progress, the most conspicuous to day, perhaps, being the campaign against tuberculosis In all of these movements the medical profession has been naturally, of right and of necessity, at the head, as it must furnish the knowledge which guides all the work

THE INFANT WELFARE MOVEMENT

Curiously enough, one of the most fertile of all fields for the practice of preventive medicine has been left almost untouched until recently No single period of life is so fatal as infancy, no disease ever had so many victims Nothing probably causes more physical unfitness and wretchedness than the effects of infantile disease in those who survive Nothing is more appealing than the helpless baby — nothing more important to the world than this future man in the making No great discoveries were needed to show why infants die Yet the infant welfare movement is only now well under way The explanation of this may lie in the rather slow differentiation of pediatrics as a specialty So long as nobody devoted any special study to the baby, it was perhaps natural enough that the enormous mortality and morbidity of infancy should be considered an incident of that period of life, but it needed only the proof which our rapidly developing specialty soon furnished that this great sacrifice of life and health was not necessary, in order to start a campaign which, young as it is, bids fair in a few years far to outstrip in importance and popular interest any similar movement heretofore inaugurated Already, indeed, it is progressing so rapidly and being taken up everywhere so enthusiastically that it seems wise for us as pediatrists to consider just how it affects us and our specialty, and what our relations and attitude toward it should be

This infant welfare movement is of necessity a many-sided one, for the infant is threatened with perils from many directions In its fulness it involves other specialties than that of pediatrics and other vocations than that of medicine To give the infant his proper chance for life and health implies the study and practical application of eugenics the improvement of midwifery, the amelioration of poverty as it affects expectant and nursing mothers the bettering of housing conditions, and many other things which involve the activity of the sociologist, the lawmaker, the sanitarian and the practical philanthropist All of these things are of interest to the pediatrist also, as anything which affects the baby must be, and it is essential that he [illegible] ant with the needs and accomplishments [illegible] lines, but the greatest opportunity, the most promising of immediate results, lies directly in his own peculiar field. It has been clearly demonstrated by the efforts put forth within the last few years to cut down infant mortality that an overwhelming proportion of all the sickness and death among infants is due to nothing more than widespread ignorance concerning the feeding, care and hygiene of the baby, and that education of mothers and prospective mothers in these particulars can be successfully carried on in such a way as to bring about almost immediately a reduction of more than one-half in the infant death-rate among those reached. No more glittering opportunity was ever offered to preventive medicine than this, and no specialty ever had a better chance to show what it was capable of doing for the world. This particular phase of the movement, being so much the most immediately practical, is the one which is receiving at present altogether the most attention and being the most rapidly developed. It is almost always the first thing attempted when new work is undertaken in any community, and its success, when properly handled, is likely to be the stimulus to further endeavor along less obvious, but perhaps equally important lines.

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* Read in the Section on Diseases
Medical Association at the Sixty
Atlantic City June 1912.

TEACHING INFANT-FEEDING

The methods of carrying out this educational work are, or should be, familiar to all of us. The modern development of the *gouttes de lait*, the milk stations, the "mothers' clinics," or most descriptive term of all, the "prophylactic dispensaries," with their visiting nurses to demonstrate to the women in their homes how to carry out the instructions they have received, have been many times described. The "little mothers' classes" in schools and social settlements are a newer, but well-established development. The instructive literature distributed in many cities is no novelty. The only reason for dwelling on the relation of the pediatrist to these things lies in the fact that the movement is so popular, and the work seems so well developed and so simple that there is some danger of its getting out of hand and being attempted without the skilled direction which is essential to the best results. A certain amount of indifference on our part, combined with overzealousness and too great haste on the side of the lay philanthropist and the health authorities, might easily lead to an entire miscarriage of the work undertaken in any community, and we should have another such waste of money and effort as accompanied the work of many of the charities which confined their efforts to the distribution of clean milk of which so much was once expected, but which accomplished really little more than to help to prove that impure milk plays by no means the most important part in the causation of infant mortality.

It is the right and duty of the pediatrist to guide, direct and develop this educational work, and he cannot afford to delegate it to any one else. He is of course by no means the only one interested. Anything connected with the prevention of disease lies also within the province of the public health authorities, and at a time like the present when the scope of their activities is constantly and rapidly broadening, so conspicuous a movement as this is sure to attract their attention and invite their earnest cooperation, in fact there can be no question that eventually the department of child hygiene will be as much a matter of course in the public health work of any large city as the department of contagious diseases is to day. The danger, if any, is that this may come too soon. It is only natural that the enterprising health officer, whether from real enthusiasm or from desire to make a showing, should reach out after any such promising and popular cause as this, and endeavor to make it his own. Just when the time is ripe for this in any given city must depend largely on local conditions and on the character of the health officer. It is certainly impossible for any health office to do this work effectively until the public has been sufficiently educated to the need of it to be willing to support it properly. This education probably comes best through demonstration by well-organized private philanthropy. The most satisfactory development is perhaps the gradual assumption by the municipality of this private work.

There may perhaps be some question, according to one's conception of the proper sphere of municipal health work, as to whether the municipality should concern itself with the actual supervision of the babies, or limit itself to the dissemination of knowledge as to the dangers that beset the infant by means of literature and instruction in the schools, and to the collection of facts and statistics regarding infant mortality and its causes, and whether the prophylactic dispensaries would not more logically be connected with the children's hospitals or similar philanthropies. Municipal health work is developing so rapidly that this point could hardly be settled now, except by saying that it seems perfectly proper for any one to undertake work of this character who is in a position to carry it out satisfactorily. However all this may be, the prime essential for any enterprise of this character, municipal or otherwise, is good guidance, especially while the whole movement is still so largely in the formative stage. The municipality or the health officer who for political or any other reason gives this opportunity over into unskilled hands is hindering, not helping, the cause. To attempt wholesale teaching of infant-feeding and hygiene and have this teaching any but the latest and best would be a poor service to the community, and no one can determine just what is best and right to teach but the pediatrist who is fully abreast of the latest developments in his specialty.

Pediatrics is a real science and one which is making tremendous strides, especially in these very matters of feeding and hygiene. The best of the specialists have difficulty enough to analyze, assimilate and pass judgment on all the new work and the changing theories. The really competent pediatrists are none too common and the specialty is so new that it is still cumbered, in America at least, by a large proportion of self-styled specialists with no real training in this field, and no good reason for their title except an interest in babies. To leave the education of the public to any of this class would be worse than a mistake. Furthermore, those who have this work in charge are in a position to acquire information and collect evidence of the greatest importance to pediatrics, provided it is gathered by trained pediatrists. To give this chance into incompetent hands would be a lamentable waste of good material. The same arguments apply of course to enterprises conducted by private philanthropy.

It would seem needless to point out that such work cannot safely be left to the nurses alone, if it were not for the fact that this has actually been attempted. So much stress has been laid in all that has been written regarding the prophylactic dispensaries on the importance of the nurse's part that some enthusiasts have been misled into the supposition that she is the only essential. The nurse's position here is precisely the same as in private practice. She is the physician's invaluable assistant, and she must bear the brunt of the work, but to leave the whole thing to her would be simply to invite, on a large scale, the trouble which we all meet in private practice, when the sole responsibility for the baby's feeding and care has been assumed by the overconfident nurse It is a tendency to be guarded against rather than encouraged

The future of the infant welfare movement lies, then with the pediatrists It cannot be a real success without their cooperation and guidance, and in proportion as they give it their interest and influence promptly and freely will its healthy advance be rapid or slow In other hands than theirs it must not only lag behind the progress of pediatrics, but it runs the risk of falling short of promised results and being discredited

OPPORTUNITIES OF THE MOVEMENT

If the infant welfare movement is so dependent on the pediatrist for success, it cannot be said that it offers nothing in return Indeed, I think it may be said that it promises to be a most important agent in hastening pediatric progress First of all, it should do much toward giving the specialty the recognition and prominence which it deserves By giving wide-spread publicity to the unnecessary loss of infant life and the great need of skilled supervision of every baby, sick or well, and by its demonstrations of what can be done in this way for the children of the poor, it must considerably expand the scope of private pediatric practice and develop a branch of it which is now little enough in evidence "Welfare work" among the babies of the well-to do is as legitimate a part of our special field as the treatment of disease, and is really needed If these babies could be under the same constant, careful observation by competent pediatrists which we insist on for those of the poor in our prophylactic dispensaries, it would redound greatly to their advantage and our credit

In addition to broadening the field of ordinary pediatric practice, the infant welfare movement is opening up a special branch of pediatrics Every pediatrist should be acquainted with the general features and tendencies of the movement, but the men who are to direct it in the larger cities, who must of course be pediatrists first of all, and of the best, ought also to have a thorough special knowledge of all the branches and phases of infant welfare work as it is carried on not only in America but also in those continental countries where it was developed earlier and has been more thoroughly elaborated and systematized It seems quite evident that there will soon be a considerable demand for men who by such training are capable of directing work on a large scale

Another thing which we may expect from this movement is that it will emphasize the need of better teaching of pediatrics in this country, and of more opportunity for special study It is no secret that our general practitioners and many of our so called specialists are deplorably ignorant of pediatrics, especially of that most important part of it, the management of the young baby, and most of our schools offer at present no great opportunity to learn it Clinics and hospitals for the sick child afford no chance to acquire the necessary knowledge of the handling of the well baby so as to keep it well The infant welfare movement promises not only to call attention to this need, but also to afford a great chance to correct it by the opportunities afforded in the prophylactic dispensaries for the observation of normal children Instruction in the management of breast-feeding, which is perhaps more urgently needed than any other, can probably be given better there than elsewhere

With the bottle-fed baby the prophylactic dispensary gives us the best opportunity we have ever had to demonstrate what we have so long been preaching — the advantage of simple milk mixtures over complicated formulas and popular proprietary foods, and the utter needlessness of nearly all these To put the proprietary foods in their proper place is a thing I am sure we have all desired, and good management of our educational campaign should accomplish it Unskilful management, on the other hand might have as much the opposite effect as does unskilful feeding in private practice

We have also in this supervision of the feeding of large numbers of comparatively normal children an unusual opportunity to try out various feeding methods, such as one would hardly get in hospital or private practice In the large cities, the prophylactic dispensaries under one management have charge of the feeding of thousands of babies and this is usually carried out so far as possible according to a uniform method Regular observations and weighings are made and good records are or should be, kept Such careful compilations of these records as might be made by scientific directors would furnish invaluable material for comparative study of the results of different methods and might well contribute greatly to progress in infant-feeding

The prophylactic dispensary is by no means the only phase of the infant welfare movement which is of value to pediatrics The whole movement involves an intensive study of the causes, immediate and remote, of infant mortality and morbidity, which must not only add considerably to our pediatric knowledge, but must broaden our conception of pediatrics As it develops, it will give the would-be pediatrist constantly more to learn and make the real pediatrist a fuller man The tendency of the movement to bring pediatrics into closer touch with all the other specialties and interests concerned in any way with the baby must add fully as much to our knowledge of our subject and be as valuable an incentive to further study and better work on our part as on theirs, and should be welcome to all of us

SUMMARY

To summarize briefly the points I have tried to make

The mitigation of the present enormous mortality and morbidity among infants is the most promising field now open to preventive medicine and the infant welfare movement bids fair to become soon the most important of all the wide-spread popular campaigns against disease and its causes

The whole movement, though it involves many other specialties and vocations than pediatrics, must be of interest to the pediatrist and should be closely followed by him Its most important phase, however, is directly in his own field The greatest chance to reduce infant mortality has been shown to lie in educating the public, the mothers and young girls in infant-feeding and hygiene This work it is the right and duty of the pediatrist to direct and it cannot meet with its full measure of success unless under skilled direction Whether it be carried on in connection with the health office or the [illegible] independent private philanthropy, th[illegible] the thoroughly competent pediatrist [illegible] ep it from [illegible] rong There [illegible] ng lost sigh

The movement offers much to pediatrists It promises to give the specialty better recognition and to enlarge its field by calling attention to the need of skilled supervision of all babies

It will demand better teaching of pediatrics

It offers the pediatrist the chance to demonstrate on a large scale the possibilities of breast-feeding, and when this fails, of simple bottle-feeding without resort to proprietary foods

It gives an unusual opportunity to try out methods of artificial feeding with the normal child

It is stimulating a close study of the causes of infant mortality and morbidity which must add much to pediatric knowledge

It tends to bring the pediatrist into close association with all others concerned with the welfare of the infant, to his benefit as well as theirs

Finally, it might well be said that the whole infant welfare movement is nothing but the newer and broader form of pediatrics, and should be so considered Pediatrics, by the nature of the material with which it deals, is better situated than any other specialty for the practice of preventive medicine, and it is at the beginning of life that the systematic application of prophylactic measures can accomplish most and be of the greatest value We must not neglect our opportunity Individual pediatrists are taking prominent parts in the movement in many of the cities now, but considering the relative importance of their mutual relations with the movement, the representation of pediatrists in the organizations which are endeavoring to control and guide it is disproportionately small, and there is, so far as I know, no participation by any organization of pediatrists This condition should not continue It would seem only natural that every association of pediatrists should be sufficiently alive to the importance of the situation to be formally represented in the National Association for the Study and Prevention of Infant Mortality, and to take a part in its work, as well as in local enterprises, which should lay more emphasis on pediatrics and its essential relation to infant welfare As it is at present there is in this country no evident connection between two developments which should be inseparable — the growth of pediatrics and the infant welfare movement.

ABSTRACT OF DISCUSSION

Dr Charles Douglas, Detroit The pediatrist is the only one who is capable of directing the public on this subject in straightforward lines of truth that will not require to be reversed in two or three years from this time, which is likely to occur if the progress is from any other source than the pediatrist

Dr G R Pisek, New York Having been very actively interested in the campaign in New York last winter, I feel that this type of work should not be put into the hands of the health boards of the city too prematurely Not that they are not the ones to take care of it—logically they are—but we should previously have the work mapped out and organized so that they need only to follow it up and not to develop it Well directed philanthropy along these lines is the proper method of procedure The private organization can show the special need to the city authorities, and then finally help secure an appropriation from the municipality so that the health board can continue the work, and not only keep up the standards set for them, but advance them I think if that can be done in our cities on a large scale we shall have effective reduction in infant mortality To do infant welfare work in a small way in a large city is almost a waste We must have something definite to show at the end of the year, something to prove that we have modified infant mortality

Dr H K Hill, Philadelphia The physicians of Philadelphia, principally the pediatrists, presented last week what was called a "baby saving show" in Horticultural Hall, open for ten days, which was directed toward educating the public There were 17,000 in attendance in one day Four subsidiary shows were also held in the poorest districts of the city, the first one in a slum district at Third and Catherine streets There was an attendance of 23,000 in four days This movement has been so far very successful There were special exhibits from the government and from charitable organizations covering eugenics, the care of the baby, a miniature milk show—things which suggest themselves in working among the ignorant of the large cities

Dr Collins H Johnston, Grand Rapids, Mich We had a campaign of this kind last summer in Grand Rapids, a city of about 125,000 people, and accomplished a great deal It was conducted by the authorities of the Blodgett Home for Children Four or five of the medical men were interested in it and conducted a clinic once a week for babies We secured from the health office the name of every baby born in the city during the previous year and sent literature to the families At the end of a year we found that the infant mortality in the city had been reduced 55 per cent. below that of the year before, which, we think, was a very marked showing for the work done We do not know that it was entirely due to our efforts, as infant mortality varies from year to year For instance, Dr Neff has told me that last year was a good one for babies in Philadelphia, but that the year before was a bad one We do know, however, that our work did a great deal of good

Dr LeGrand Kerr, Brooklyn We as pediatrists must recognize the fact that as a class we are not yet very highly appreciated It is only within the last few weeks that the New York State Society has recognized pediatrists The general tendency is to make them subservient to the obstetrician As a specialty pediatry is not yet generally recognized as it should be If that is true in the profession, it is more emphasized outside, and it does not need much to have the health officer or health boards criticize the work of any of us who may interfere with their particular line of work, or who are not enthusiastic about the particular way in which they carry it out Dr Cooley has rightly emphasized the point that this question should not be relinquished readily to health boards or health officers, but should be under the direct and complete control, for a time at least, of pediatrists, until others are equipped to take up the work. Yet in another portion of his paper, Dr Cooley states that there are too few pediatrists who are well equipped for this work I do not agree with him By such a statement we place in the hands of those who are not in sympathy with the stand we take a tremendous power for dealing us a blow in having this work carried on If the pediatrists are to be recognized by the profession at large, by the public and by the health officers, they must stick together

Mr. William A Howe, Albany, N Y We in New York believe that you who are doing special work in this line are the ones who should assist us in a concerted effort to reduce the alarming infant mortality so extensively prevalent in every community With that idea in mind, Commissioner Porter has recently appointed on his consultant staff, one of the leading pediatricians of the state He is expected to advise and direct our department in public health matters pertaining to children As soon as appointed, he prepared a booklet on 'How to Save the Babies" This deals with the mother before the baby comes, with the mother and the child when the baby comes, and with the mother and the child after the baby comes It is brief, yet sufficiently comprehensive to teach the expectant mother, as well as the mother, much of practical value to her not only in preparation for motherhood, but in the care of her child and herself This little book we hope to be able to place in the hands of every expectant mother in the state or every new mother, as quickly as possible before the birth of her child or after its delivery Its distribution will be made through the local health officer, physicians and registrar, or any person desiring can apply for a copy direct to the Commissioner of Health Many thousands of copies have been circulated and we regard it as one of the most popular and practical movements of the department in educational work

Health departments need and must have your cooperation as specialists With it they can accomplish much more than would otherwise be possible, and is not the same equally true so far as you are concerned? While you are assisting us can we not frequently reciprocate? Does not reciprocity in public health work offer one of the greatest opportunities for accomplishing good, and should not physicians and sanitarians be its strongest advocates? I want to appeal to you to cooperate with your local health authorities along these lines and not, as stated by Dr Kerr, attempt to assume the full responsibility or the full activity in this important public health question, which is one of the greatest with which we are concerned and one capable of the greatest possibilities

Dr H M McClanahan, Omaha There is one statement, which if I heard aright, I think ought not to go unchallenged that the chief result of the milk propaganda had been to indicate that milk was of much less importance in relation to the infant mortality than we had formerly supposed This is a surprising statement to come from a man who has shown so much familiarity with infant welfare, as Dr Cooley In fact a considerable portion of the rest of his paper largely nullified that statement How is one going to feed these babies right if he does not start with good, clean milk? Most of the men in this room would agree that one of the most important things in the promotion of this infant welfare movement has been derived from pure milk movements, beginning with the certified milk movement and other influences that go to the improvement of a pure milk supply I believe that Dr Cooley will agree with me that that sentence was inadvertent, and should not be published

Mr W A Howe, Albany, N Y Inasmuch as several members of your Section have expressed a wish for a copy of the little booklet on "How to Save the Babies" to which I referred, I might add that Commissioner Porter will be pleased to send a copy of the same to any physician present who may designate his desire by writing for it

Dr T L Harrington, Milwaukee, Wis This is a new line of work, and as a result some mistakes will be made It will be interesting for the members present to know the experience we have had in Milwaukee Some time ago the county medical society started work along this line Shortly after the advent of the social workers among the poor, a movement was started to bring to the city a social worker to take charge of child welfare work This work was started in August, 1911, and, under the advice of a committee of physicians, has proved effective and successful In less than a year the death rate among infants in a portion of the Polish district in Milwaukee was reduced 60 per cent This social worker when not a physician is necessarily under the advice and guidance of physicians A nurse was sent into every home in which it was reported that a baby had been born The columns of the newspapers of the city were thrown open to the child welfare movement, and a short column on child welfare was printed in every newspaper in the city six days in the week These articles were furnished by the child welfare commission

It seems to me that this is a work of tremendous importance At present the work has been taken over by the health department The social worker who was at the head has another position, and a physician is to be put in charge I believe that a physician should be at the head of this work for several reasons It is not only necessary that he should be a trained pediatrist, but also that he should have a training in social work It is extremely important that the physician who is the guide in this work should have had some sociologic training If he is not a student of sociologic conditions he is not going to make a success of this work

Dr John Zahorsky, St Louis I want to point out certain weaknesses of the movement The first is that pediatrists are not agreed on certain things, especially in connection with feeding There are general hygienic principles, however, which can be carried out. Second, it will not do to put the work in the hands of pediatrists who are not properly trained in this line of work, because the confidence of the people is gradually lost The work should go slowly, I think.

Dr T B Cooley, Detroit In answer to Dr Kerr, I know that I did not say that pediatrists are none too good, but that they are none too common As to the effect it might have to have such statements go out in the first place this paper was written for pediatrists In the second place, some of those instances have already arisen, and it seems to me that the best place to mention them is before a group of pediatrists

Perhaps I made the statement regarding milk philanthropies a little too bold, but it is true that philanthropies which do nothing but furnish pure milk do nothing to reduce infant mortality Some have developed into useful philanthropies, because they found they had been accomplishing nothing, and have gone into welfare work

THE PROPERTIES, USES AND INDICATIONS OF THE VARIOUS CARBOHYDRATES USED IN INFANT-FEEDING *

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In infant feeding the term "carbohydrate" is applied to a number of compounds related to starch and sugar, which contain carbon united chemically with hydrogen and oxygen, these elements being present in the proportions of two parts of hydrogen to one of oxygen, as in water, H_2O

Many carbohydrates are known and their common ultimate chemical composition is shown in Table 1, covering carbohydrates employed in nutrition work

TABLE 1—CHEMICAL COMPOSITION OF CARBOHYDRATES USED IN NUTRITION

Carbohydrate	Composition Carbon	 Hydrogen	 Oxygen	Formulas
Cellulose	6	10	5	$C_6(H_2O)_5$
Starch	6	10	5	$C_6(H_2O)_5$
Dextrin	6	10	5	$C_6(H_2O)_5$
Glycogen	6	10	5	$C_6(H_2O)_5$
Cane sugar (saccharose)	12	22	11	$C_{12}(H_2O)_{11}$
Milk sugar (lactose)	12	22	11	$C_{12}(H_2O)_{11}$
Maltose	12	22	11	$C_{12}(H_2O)_{11}$
Dextrose (synonyms diabetic sugar glucose grape sugar)	6	12	6	$C_6(H_2O)_6$

The carbohydrates are used in nutrition for the energy and water they yield on oxidation As the hydrogen will be satisfied by the oxygen in the compound, all there remains to be oxidized is the carbon The number of calories a carbohydrate will yield depends, therefore, on its carbon content

It will also be noticed that the only difference in composition among the various carbohydrates, as shown in the table, is in the amount of water (H_2O) combined with the carbon

When carbon and oxygen combine, energy and heat are liberated, and as the fate of carbohydrates in nutrition is to be combined with oxygen of the air taken in by the lungs, it is evident that carbohydrates are used to supply energy and heat to the body and are properly classed as energy foods

The amount of energy a material can supply may be determined directly from the amount of heat evolved when it is burned with oxygen, and it is customary to judge the value of energy foods by the number of calories or heat units a given weight of the food will yield when burned

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty-Third Annual Session held at Atlantic City, June 1912.

As there is not much difference among the various carbohydrates in carbon content, and as the hydrogen and oxygen satisfy each other, there is little difference among them in the number of calories they will yield, and in practical nutrition work all carbohydrates are assumed to be interchangeable as far as caloric value is concerned

All carbohydrates used in nutrition have the same nutritive function and about the same caloric value, but they differ in physical properties (some, as starch and glycogen, being insoluble), in the amount of digestive effort they call forth, in the rate of assimilation, and in fermentability

Care must be exercised not to judge the availability of a carbohydrate for infant-feeding from its most obvious properties, or decidedly erroneous conclusions may be drawn For instance, cane-sugar is not directly fermentable, but it is apt to cause fermentation, milk-sugar is not fermentable by pure yeast, but there are times when it cannot be used, because of fermentations Maltose, on the contrary, is exceedingly fermentable, being used in preference to other carbohydrates in the fermentation industries, such as the manufacture of beer, yet it is used most successfully in infant-feeding and is especially recommended in cases of intestinal fermentation One of the grand contradictions of nutrition is that the more fermentable a carbohydrate is, the better fitted it is for use when poor digestion and assimilation of carbohydrates are present

To understand the indications for the various carbohydrates in infant-feeding it is necessary to follow them from the time they are ingested until utilized and excreted

ASSIMILATION OF CARBOHYDRATES

No matter what form of carbohydrate is taken, if it can be digested it is ultimately changed into dextrose before utilization and carried to the liver where it is converted into insoluble glycogen and stored for future use If the absorption of dextrose or other carbohydrate is too rapid, the liver cannot convert it into glycogen as fast as it is presented and the excess passes into the urine with resulting alimentary glycosuria There seems to be some regulative apparatus which prevents the blood containing more than a certain amount of sugar When the amount of carbohydrates assimilated is greater than is needed to maintain the supply of glycogen in the liver, it is converted into fat, which is a more concentrated energy food than glycogen, having a little more than twice the caloric value, the relative values being 28 to 12

A small amount of glycogen is found in all the cellular tissues and in the muscles, even in embryos If there is a demand for energy, as when a muscle contracts or the heart beats, the glycogen of the tissues or muscles is converted into dextrin, maltose and dextrose successively, the carbon of the dextrose is then oxidized and the energy is liberated, heat being produced at the same time The carbon dioxid produced is excreted by the lungs and the heat passes off by radiation or is converted into latent heat by the evaporation of perspiration, depending on the temperature of the air

The performance of work rapidly depletes the supply of glycogen in the muscles, and that in the liver is called on to make good the loss Glycogen is so nearly like starch that it is called animal starch Both are insoluble and both are acted on by diastatic ferments forming dextrin and maltose, which are converted into dextrose, the sugar found constantly in the blood When the glycogen of the muscles is used up during work the enzymes of the liver and blood convert the glycogen of the liver into dextrose, which the blood carries to the muscles where it is reconverted into glycogen This continues as long as there is glycogen in the liver When the supply of glycogen in the liver is exhausted, the fat is converted into dextrose and carried to the muscles and changed into glycogen As is shown by studies in metabolism of starvation, the expenditure of energy depends on the presence of glycogen in the muscles, and for this reason glycogen is found in the muscles long after the supply in the liver has been exhausted and to the end of starvation

PHYSIOLOGIC PROPERTIES

When it is thoroughly understood that the final product to be produced from the carbohydrates taken as food is glycogen, the order of availability of the various carbohydrates will readily be grasped from the following outline of their physiologic properties

1 Only fermentable sugars form glycogen

2 Dextrose and maltose when injected subcutaneously are assimilated because the blood contains enzymes that will convert dextrin and maltose into dextrose Dextrose and maltose are highly fermentable

3 Cane-sugar and milk-sugar when injected subcutaneously reappear almost entirely in the urine because they are foreign to the blood and cannot produce glycogen until they have been converted into fermentable sugars in the intestines

4 The relative order in which sugars are available for forming glycogen is *dextrose, maltose, cane-sugar, milk-sugar*

While dextrose has the highest limit of assimilation, too much of it in the food will overtax the liver and cause alimentary glycosuria, as it cannot be converted into glycogen as fast as it is absorbed

A certain amount of energy is expended in digesting and assimilating carbohydrates, and *their relative food value* depends on the amount of energy that must be expended in converting them into dextrose The reason maltose and cane sugar have greater availability than milk sugar is shown by the following illustrations of what takes place when they are rendered assimilable

$$\text{Maltose} + H_2O = \text{dextrose} + \text{dextrose}$$
$$\text{Cane sugar} + H_2O = \text{dextrose} + \text{levulose}$$
$$\text{Milk sugar} + H_2O = \text{dextrose} + \text{galactose}$$

Maltose is completely converted into dextrose by the chemical addition of water and is immediately available, cane sugar when split up is converted half into dextrose and the other half into levulose, which the enzymes of the blood can convert into dextrose, while milk-sugar is converted into half dextrose and half galactose, which must undergo further change before it can be assimilated The net energy value of maltose is greater than that of cane sugar, and the net energy value of cane-sugar is greater than that of milk-sugar

The tendency for fat to be stored after the liver is filled to its capacity with glycogen readily explains why maltose and cane sugar, which have a higher net energy value, are more apt to cause fattening than milk-sugar, and why a high maltose content in the food is prone to cause diarrhea — it is crowding the liver too much and must be eliminated

ADAPTATION OF CARBOHYDRATE TO INFANT'S CONDITION

When an infant is strong and vigorous it has a plentiful supply of glycogen in its tissues and liver, and therefore a reserve of energy Under these conditions milk-sugar, which is slowest to produce glycogen, acts well, as it does not overtax the liver or cause alimentary glycosuria or excessive fat production When an infant is weak or poorly nourished and its reserve of energy is small, there is a demand for rapid production of glycogen For such infants dextrose or maltose, which can be taken directly into the blood and converted at once into glycogen in the tissues or muscles, where there is a demand for it, are more effective than milk-sugar or cane-sugar Maltose is particularly available because it is one of the forms through which all the carbohydrates of the body pass before they are utilized When absorbed, maltose can be changed into glycogen in the tissues or into glycogen in the liver as conditions warrant It might be said to turn either to the right or to the left as its presence is needed in either direction

In this connection it is significant that in the process of adult digestion the first product of the digestive secretions is maltose from the starches by the action of the saliva Since we know that there is a large expenditure of energy during the digestion of a meal, it is fair to infer that Nature intended this energy to come from the food that was being digested and not from energy stored up from a previous meal, and thus provided that the maltose should come from the food and not from the glycogen of the liver At any rate, it is well established that thorough chewing of a mixed diet renders digestion easier than if the food is bolted

There can be no question but that by adding products of starch digestion, such as dextrin and maltose, to an infant's food, the same digestive effect is produced as when an adult thoroughly mixes his food with saliva, and that the energy needed for digesting the food can be obtained from the food itself This may be of advantage when the infant is called on to digest cow's milk, which requires the expenditure of more energy than does human milk, or when the infant is poorly nourished and therefore has no appreciable reserve of energy in the form of glycogen

In the artificial feeding of infants there are more factors to be considered than the composition of the food and its caloric value, for it has been shown that all carbohydrates have practically the same caloric value, but that they are not equally available, different amounts of energy being called for to render them suitable for assimilation While it is possible to determine the energy required to render assimilable the food of individual animals experimented on, no law or rule can be established that will apply to all infants, because of individual differences

A point that should not be overlooked is that the physical condition of the food has a marked effect on its nutritional value even if it is completely digested Animal experiments have shown that from 40 to more than 100 per cent of the energy or caloric value of a meal may be expended in digesting it, and Armsby has pointed out that on certain forms of food an animal will die of starvation sooner than if no food at all were eaten, the explanation being that all the energy of the meal and a considerable portion of the stored-up energy are expended in the work of digesting the food

When infants are fed cow's milk the problem of energy expenditure in digestion is necessarily different from what it is when human milk is given, because of the differences in the physical properties of the milks after being clotted by the gastric secretion Clinical experience the world over has shown the advantage of having part of the carbohydrates of the food in quickly assimilable forms

For nearly twenty years I have practiced and taught this truth,[1] and Keller and Finkelstein have also strongly advocated an application of the same principle though in a different manner

All have recognized the necessity of altering the physical properties of the curd of cow's milk in some way, and the addition of alkalies, decalcifiers or antacids for doing this by chemical means or the use of gruels for accomplishing the same thing by mechanical means is almost universally practiced Finkelstein clots the milk and then passes it through a sieve to obtain the same effect

All these methods of modifying the character of the curd of milk lessen the demand for energy during digestion When easily assimilated carbohydrates are added to the food so prepared, energy food is made immediately available and the net value of the feeding is increased

A SCHEME OF INDICATIONS

Conditions so vary with individual infants that I have always believed that the best method of preparing substitute food for them is to use as a basis milk or top milk diluted with cereal gruels of definite strength for the mechanical effect on the curd of the milk, and then by altering the character of the carbohydrates adapt them to the energy and digestive requirements of the individual infant As glycogen and starch are essentially the same and undergo the same chemical transformations when acted on by diastase, it becomes a simple matter in practice to prepare food in the home that shall call forth all the digestive powers when there is plenty of reserve energy in the infant, and for infants whose reserve of energy is small, a slight change in the method of preparation of the food will alter the availability of the carbohydrates in such a way that the infants will be supplied with such materials as they would prepare in their tissues if they were normal

These methods are simple, inexpensive and almost universally applicable, but they must be applied with an understanding of the purposes various carbohydrates serve in nutrition They consist essentially in using gruels made from various cereals as a starting-point and then by means of diastase converting the starch into soluble starch, dextrin or maltose as may be required The extent of the conversion of the starch is to be regulated by the digestive ability and needs of the infant A nearly complete conversion into maltose is indicated when rapid assimilation is desired To obtain the maximum amount of maltose the conversion should take place at about 150 F, but when soluble starch and dextrins are sought the temperature should be about 165 F

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ABSTRACT OF DISCUSSION

Dr Charles Douglas, Detroit It has been my experience that these children will digest so much curd, irrespective of the addition of the carbohydrate I have used them both ways, and have been very much impressed with the fact that this subject has received greater prominence than it has deserved I have watched the effect of increasing the amount of each one alone, and have not been convinced that it is of such great value as is commonly thought I do not wish to deny that it is beneficial, but I think it is overestimated

The idea presented by the paper regarding the digestibility or the advantages of digesting starch in different ways brings up very strongly the question of the addition of starch to the dietary in the dry form at as early a date as it is possible to get the child to take it This brings us back to the old so called errors which we have been inclined to attribute to mothers when feeding their infants while nursing, giving them always a little taste of bread or cracker or something else from their own food We are compelled to recognize the fact that these women have been doing a great deal of good as well as some harm, but there is no doubt of the fact that the giving of the starch in this dry form has a very great advantage over the giving of it in a wet form This occurs continually in all our work, and I have been so impressed with it that for years I have taught mothers to give a piece of crust just as soon as the child nibbles at it And as rapidly as the child will take the dry starch to reduce the wet form, I have made this a routine practice

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[1] Studies in Infant Feeding New York Med Jour Sept 16 1893

Dr J P Crozer Griffith, Philadelphia I do not think that Dr Chapin means to exclude the older plan of treatment the employment of milk sugar There is too great a tendency to day to the abandonment of this in feeding infants, and toward the using only of malted preparations It is a pity, perhaps, that we medical men tend so much to run to extremes There is just now a wave of maltose feeding It has gone over the country in the last year or two, and over other countries as well I have for years been a great believer in the use of dextrinized starch in certain cases in infant feeding I have long used it, and have obtained excellent results, dextrinizing the starch in the nursery as required But even before that I had excellent results, as we all have had, with food containing no dextrose or maltose but sugar of milk The matter is an individual one with the infant The average healthy infant does not need dextrinized starch, but there are many cases in which it fills a very useful place

Dr H D Chapin, New York The different elements of milk have assumed great importance in the professional mind at various periods We remember years ago it was all fat, then all casein and curd, and, in the recent year or so, all sugar My idea in preparing this paper was simply to clarify our ideas with reference to sugar in the food, how we could utilize it, and when the different sugars should be used I did not mean in any way to recommend that these other sugars should take the routine place of milk sugar In fact, the whole paper was merely intended to show how milk sugar is normally assimilated under ordinary conditions, and also to show how and when these other sugars could become available and temporarily displace milk sugar We must have in our hands the knowledge and a method of utilizing these different varieties of sugar for specific cases I do not usually recommend dextrose for ordinary cases

THE PRACTICAL IMPORT OF RECENT WORK ON HYSTERIA *

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Whether hysteria is determined, as Breuer[1] thinks, by the occurrence of peculiar dream-like conscious states with a narrowed association capacity, and whether these are purely due to psychically painful experiences as argued by Freud,[2] or whether, following Janet,[3] hysteria is to be summed up as a weakness of the power of associating impressions, or whether it is an actual splitting of consciousness which more or less divides its victims into the exaggeration of many-sidedness known as multiple personality (Sidis[4]), or whether, with Sollier,[5] we conceive hysteria as an inopportune sleep or numbness of a part of the cerebrum, all clinicians agree with Babinski[6] that the most conspicuous and invariable characteristic of a hysterical patient is suggestibility

As nothing is more detrimental to the progress of science than to call by the same name phenomena which differ in essence, it would be eminently desirable that students of the psychoneuroses should adopt some least common measure for the study of each group, and as it seems quite evident that there is a group of various symptoms, each of which is "susceptible of being produced by suggestion and removed by suggestion-persuasion,"[7] it is strongly to be desired that differences should be sunk for the time being in order that by use of a common, unique and unequivocal character we may collect examples by the correlation of which we may hope to penetrate more deeply into the origin of pithiatism[8]

That Babinski has fallen back on a teleologic definition[9] of suggestion is to be deplored, for the sense in which he uses the word, that of an insinuation, that is, something evil, is entirely subversive of the essential psychologic mechanism that is connoted by it, and so long ago made clear by Bernheim[10] The essence of implantation of ideas by suggestion is not their evil nature but the manner of their reception the subject receives them unaware of how they have gained entrance to the mind

Elsewhere[11] I have tried to develop the difference between this process and that which may be called persuasion, in which the subject takes full cognizance of the manner in which his belief is caused to alter A man persuaded knows why he knows a person who has received ideas by suggestion merely knows It is the method in which knowledge is acquired by children, savages, many of the uninstructed and the credulous in general Examples will make clear the manner in which symptoms are acquired by suggestion

Case 2 —*Hysterical Obsession and Phobia* —After an attack of influenza, a woman returning in a crowded car from a shopping expedition began to feel much oppressed and in want of air The heart, enfeebled by the influenza poison, and we know not what others taken as medicaments and aliments, ceased to respond to the call on it for a more rapid flow of blood so that the aeration could be sufficient and a faint ensued, with the psychic accompaniments of irresistible terror and dread of dissolution Never since has this woman been able to bring herself to go alone into a car, the very idea of doing so induces the fear of fainting She is not obsessed by the idea so long as the question of entering a car does not arise, but although she knows her conduct to be unreasonable, she cannot bring herself to act reasonably about going alone into a car

The suggestibility of children[12] is much more labile than that of adults, for while they are very susceptible, children do not usually hold tenaciously and are easily diverted from their loosely fixed ideas when morbid For instance, it is perhaps unique for a girl so young as 11 to believe that she is utterly unable to eat, and to believe that strongly enough and long enough to overcome the instinct of hunger to such an extent that she had to be removed for treatment to a hospital, in the Salle Pinel of the Salpêtrière, Professor Déjerine built up her emaciated body by generous feeding, and at the same time undid the false notion she had acquired from her elder sister who had been a patient in the same place[15]

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912.

* Because of lack of space a case report and a number of foot notes have been omitted in The Journal The complete article appears in the Transactions of the Section

[1] Breuer and Freud Studien über Hysterie 1895

[2] Freud Sammlung kleiner Schriften zur Neurosenlehre Vienna 1906

[3] Janet Automatisme psychologique Paris 1889

[4] Sidis Multiple Personality New York 1900

[5] Sollier Genèse et nature de l hystérie Paris 1897

[6] Babinski Compt. rend Soc. de neurol de Paris 1901

[7] Conférence devant l Internat Paris 1906

[8] A neologism coined by Babinski from the Greek words πείθω, meaning persuade and *ἰατός*, meaning curable

[9] Babinski Compt rend Soc de neurol de Paris 1908

[10] Bernheim Hypnotisme suggestion psychothérapie Paris 1893

[11] Williams Tom A The Difference Between Suggestion and Persuasion Alienist and Neurologist 1909

[12] Williams Tom A Management of Psychogenic States in Childhood Am Jour Med Sc, December 1912.

The cases under the heading of "Treatment," show the mechanism also

THE ALLEGED TROPHIC SYMPTOMS OF HYSTERIA HYPERTHYROIDISM EMOTION

This manner of causation so far has not been proved capable of directly producing edema, erythema, urticaria, ulceration, hematemesis, hyperhidrosis, dilatation or inequality of the pupils, tachycardia, muscular atrophy, or any such vasomotor and trophic disturbances which were formerly included in hysteria, and it is now clear that such cases are due to physical causes[16] which are becoming less and less obscure as pathologic data accumulate *Many of these symptoms are angioneuroses*[17] which have nothing to do with either suggestibility or other psychic processes, even emotionalism

Similarly, the best observers believe that hyperthermia cannot be produced by psychic means at all, although it is now quite clear that a rise of temperature often ensues after the psychic excitation of patients suffering from hyperthyroidism[18] This, however, is due to the suddenly increased secretion of the thyroid gland, which may sometimes even cause death But if the patient lives, the temperature soon subsides and its rise cannot be considered psychogenetic in the full sense

Similarly the arrest of digestive secretion induced by bad news occurs in consequence of the emotion aroused and is strictly temporary[19] unless the emotional state is constantly reinforced from without or within When the modification endures, we have perhaps the only example of a permanent physical modification of a function not under the control of the will of which the source is directly psychogenetic Although its genesis is emotional yet as the emotion may be determined through an idea, and the idea may be implanted by suggestion, it may sometimes be legitimate to attribute to hysteria[20] this form of mental anorexia, in spite of its manifestation through a portion of the nervous system which is mainly autonomic That the autonomy of the gastric secretion is not complete, however, has been clearly shown by the researches of Pawlow[21] and Cannon,[22] and as no such dependence has been shown concerning permanent changes in the skin and mucous membranes, a better type of evidence than heretofore must be brought forward to convince us of the psychogenesis of the cutaneous manifestations at one time described with hysteria

Simulation and Hysteria—I do not wish to do more than remind the reader of the large number of cutaneous eruptions, edemas, fevers, etc, which have been produced by simulators, hysterical and non-hysterical The desire to deceive for the sport it brings or from no apparent motive is a symptom which may have nothing to do with hysteria Dupré[23] has created the term "mythomania" to characterize this group of abnormality, and every medicolegal expert and many a schoolmaster knows it well

The number of those cases which "could not possibly have had access to any means of provoking their symptoms" only indicates the looseness with which such negative evidence is accepted, as for instance in a case of alternating mydriasis which I observed in Babinski's clinic, for though the patient's father indignantly repudiated the mere statement of the fact, it was found that his daughter had been placing in her eye drops of an atropin solution filched from her employer In another case, a man confessed to concealing a syringe in the rectum, and in a moment of excitement an evacuation revealed two

Of course, mythomania, a type of moral degeneracy or of lack of adaptation by which resort is made to trickery may be accompanied by suggestibility as it generally is so that academically speaking, a deliberately produced lesion simulating spontaneous disease which the patient is trying to imitate may deserve the term hysteria, for imitation is one of the forms of suggestion Intermediate in type are the imitations of disease seen so frequently in the more ignorant hospital attendants and patients These, too, often figure as hysterics, and indeed this symptom may be induced by suggestion as in the case of nurses and patients who inflict on themselves eruptions, ulcers and swellings, or complain of palsies, contractures, vomiting of blood, etc, by the imitation of those they have seen in the hospital The mental debility which allows them so puerile an outlet for their activities permits them also to receive suggestions without criticism — that is, to be hyper-suggestible

The Stigmata are Artefacts—Unless their methods of examination act by removing the symptoms before they can be found, so to speak, the experience of Bernheim[24] and Babinski[6] clearly shows that both anesthesia and contracted visual fields and other stigmata, as Charcot called them, originate, in the vast majority of cases in unconscious suggestions of the medical examination For over twelve years neither observer has found a contracted field in a patient not previously examined Either explanation is consistent only with extreme suggestibility

THE GENESIS OF HYSTERICAL SYMPTOMS

The cause of this has not been inquired into very profoundly by either Babinski or Bernheim but attempts to account for it have been made by others The explanation which commands the most notice is that of Freud,* who ascribes it to a mental conflict which has arisen as a result of painful experiences in early childhood It is unfortunate that so many of his followers have attributed the significance of this explanation to sexual insults in themselves, for Freud distinctly says

> I passed a good way beyond my former point of view Correct the imperfections, displacements and misconceptions My former meager material gave a great many cases in which sexual seduction played the main role I overestimated the frequency of these I have since learned to explain many as an attempted defense against the reminiscence of masturbation

Freud has also disclaimed his conception that passive behavior predisposes to hysteria in these erotic events,

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15 Déjerine Leçons cliniques 1907 unpublished
16 Medicini Bono Tr Congrès de Genève 1907
17 Solis Cohen New York Med Jour 1910
18 Crile Am Jour Surg 1908
19 Williams Tom A Southern Psychologic Society, 1909 Jour Abnorm Psychol June 1910
20 Williams Tom A The Most Frequent Cause of Nervous Indigestion Jour Abnorm Psychol February 1909
21 Pawlow The Work of the Digestive Glands, London 1902 Brit Med Jour 1906
22 Cannon Am Jour Med Sc., 1909
23 Dupré La mytho[illegible]
24 Bernheim Comment [illegible] le [illegible] Med., 1907

while active behavior results in compulsion neurosis He still believes, however, that the element of constitution and heredity really means "sexual constitution"

Although Freud still attributes the psychosis of obsessions and phobias and also the anxiety neurosis to direct perturbations of the sexual functions, he no longer imputes to this immediate cause what he calls hysteric symptoms, which he agrees are purely psychogenic He attempts to explain the state of these patients by the subconscious[25] effects of a forgotten circumstance which the patient has been unable to amalgamate with the rest of his mental life, and which he has succeeded in forgetting on account of its painful nature[26] Its memory can be recalled, however, by his "free association" method, which consists in placing the patient in a tranquil attitude and inducing him to think aloud about the events most nearly connected with his illness, and urging him to push his introspection further back[27]

Other means of recalling lost memories are the association test of Jung,[28] and the psychogalvanic reaction of Veraguth with which Jung,[20] Petersen[30] and Sidis[31] have largely worked The last has proved it to be an electromotive muscular change during emotion, occurring only during contraction

Still better known is the method of hypnosis The hypnoidization procedure of Sidis[32] seems to me closely similar to that of Freud

All of these methods have the common property of abstraction from extraneous stimuli, with concentration on the trend of thought required by the physician, in this respect the method of simple anamnestic interrogation is in many cases just as informative when conducted with skill and tact But it fails in respect to the vividness of the recollections which it recalls The patient here talks about his experiences In hypnosis and other distraction methods, the patient reenacts his experiences as he would do in his dreams[33]

In the treatment of grand hysteria, Sollier[5] has laid great stress since 1892 on the need of the patients in hypnosis to carry themselves further and further back among their infantile experiences While Freud says, "There is surely something more, think," Sollier urges, "Allez plus loin, plus en arrière." To judge by his early case reports (for he no longer considers it worth while to publish them), the results of his treatment do not show any inferiority which would lend countenance to the assertion of Freud's followers that their method of psychanalysis is a sine qua non in obstinate cases, for these recalcitrant cases are just those which find their way to Sollier

Now, from these facts it should be apparent that a hysteric symptom is one induced by an idea derived from suggestion, and that empiric methods are worse than futile, for they merely reinforce the patient's belief in bodily sickness

THE REMOVAL OF SYMPTOMS AND THE TREATMENT OF HYSTERIZABILITY

The search of the pathogen and the discovery and explanation of the causative idea of the patient suffices sometimes to remove the symptom it has caused, but it does not cure the disease To do this a course of reeducation[34] of the patient's hysterizability is needed This is not always possible in practice on account w the time and expense required, but we are now ııed position to dispense with some of the elements of tso expense I refer to prolonged isolation, overfeeding, massage, electrical applications and special nursing to which so many hystericals have been subjected on account of the secondary "neurasthenic" symptoms they have developed

I have indicated at length[35] the means of distinguishing this false neurasthenic state from the really primitive asthenia, Bernheim,[36] too, has devoted a recent monograph in part to this distinction, which is, in short, that neurasthenia, a rare condition, is a physical exhaustion either congenital, toxic or other, and that any psychic symptoms a neurasthenic may present are usually secondary and disappear spontaneously as his bodily condition improves, unless, indeed, they are maintained through the reinforcement of their suggestion by the injudicious solicitude of physician or friend[37]

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[25] The term subconsciousness has been much abused but its consideration here would lead us too far suffice it to say that the submerged memories which determine so much of our conduct and belief can scarcely be said to act in themselves but rather by the inferences which are drawn from them and of which the subject is more or less aware, although he will not always admit their influence His denial, however is largely like that of a woman denying that she seeks a husband or of a politician denying that he is looking for an office If not merely conventional the disclaimer is dictated by a feeling of shame or by a dislike for the confession which is so good for the soul A frequent declaration of my patients is somewhat as follows I do not know why I am talking like this to you I would not dare thus reveal myself to anyone else not another person knows these things that I am telling you I hardly know them myself, etc Now this confession has not been obtained through hypnosis or other special means In one sense the patient does not explicitly feel her revelations until they are completed But could the fact that her ideas require for clear formation their focusing into a definite statement justify us in calling them subconscious? I think not for the process does not differ from the clarification of thought engendered by writing speaking or other attempts at precision of ideas which before that may have been only in adumbration Such was the means by which a patient of Flournoy (Automatisme téléologique contre la suicide Arch de psychol, 1908 reviewed by me Jour Abnor Psychol, 1909) whom some clinicians would have called a hysteric, made clear to herself for her salvation from suicide the thoughts which lingered in the back of her mind but which had been temporarily overshadowed by her despair in having to repulse her child for fear of infecting it. In a dream state she had a vision of a dear friend leading her away from the water into which she was about to throw herself. Now although the conversation she imagined was purely hallucinatory it was none the less valid as a representation to herself of ideas which took this method of formulation The mechanism is commonly used by automatic writers crystal gazers etc. who have recourse to a consultation with an oracle which they sometimes believe to be extraneous in source Others however are equally mystical in the way in which they conceive it to be another self subliminal or subconscious

[26] But is it really necessary to invoke a specific trauma to explain hypersuggestibility? Is it not a common experience that when the mind is strongly preoccupied by any course of thought, absent minded acts are the rule? What are these but immediate reactions to stimuli while the reflective processes are occupied by the dominant train of thought? In a sense that which preoccupies the patient is dissociated from the stimulus to which he reacts while absent minded and indeed from the events of daily life as long as the preoccupied state persists To this extent hysteria is a phenomenon of psychologic dissociation This explanation of its mechanism is not especially different from what Freud has called conversion Psychologically the process is the same as that occurring in suggestion

[27] It has been alleged that Freud and his followers inevitably guide the revelations of their patients toward the ideas of which they are in search and that they strongly influence the content of *the patient s thought This is tantamount to saying that some at* least of the patient s ideas arise from the suggestion of the examining physician When one remembers the ease with which even physical symptoms are suggested this objection has *a priori* much force in so delicate a field as psychologic investigation The controversy can be settled only by impartial and well trained observers working with Freud s method At all events it is becoming more and more clear that sexual traumas of early childhood need not produce a psychoneurosis and that at least the active cause of psychoneurosis in some patients appears quite unrelated to the sexual life One is tempted to believe that the enthusiasm of discovery has tended to an exaggeration of the weight of this etiologic factor especially in an age in which a reprehensible prudery has prevented its due consideration by the profession at large But it is significant that French observers of whom this fault cannot be alleged do not attach preponderant importance to the sexual factor in neurotic disturbances

[28] Jung Ueber der Psychologie die Dementia Precox Leipsic, 1906

[32] Sidis Boston Med Jour, 1907

[33] The free association of thought at which Freud aims during psychanalysis is believed by him to resemble that of the dream state But neither during the dreams of sleep nor still less in daydreams is there that complete suspension of autocritical judgment one might suppose were only the fantastic nature of dreams considered Even the bizarre images of the dream are symbols of a latent psychic content often unsuspected by the patient In the same way he interprets *a hysteric symptom as an unconscious con*version by the patient into a physical symptom of a thought which in its naked form he could not bear and it is in finding of these that psychanalysis is so useful The suppressed experiences are particularly active in dreams Hence analysis of these is most useful as a short cut to an understanding of much of which the patient s waking mind is ignorant.

[34] Williams Tom A The Nature of Hysteria International Clinics 1908 See also Psychoprophylaxis in Childhood Psychotherapeutics Boston 1910 and Jour Abnorm Psychol July 1909 also Requisites for the Treatment of Psychoneuroses Monthly Cyclo 1909 etc.

[35] Williams Tom A Arch Diagnosis 1909

[36] Bernheim Neurasthénie et psychonévroses, Paris 1908

On the other hand, the neurasthenic symptoms which are induced by a fixed idea of illness soon disappear when the patient's ideas are rectified as illustrated by my case of traumatic neurosis, and by many a woman who has arisen from a sick-bed, when exigencies or her own temper have demanded, into the full activity of normal life

ISOLATION UNNECESSARY A "UNICIST" PSYCHOTHERAPY MONISM

The fetish into which the Weir Mitchell treatment has been erected has been demolished by the recent work of Levy,[38] who shows that Dubois' way of conceiving the relation of body and mind[39] does not differ from the dualism he imagines he has transcended, and Levy points out how grossly and naively Dubois exaggerates the influence of the psyche over bodily conditions In this respect Bernheim has long transcended his former views regarding the power of hypnotism He has done so by acquiring a clear notion of the difference between psychogenic and somatogenic nervous symptoms

Now, Levy shows that true isolation is not a physical removal from environment, but a moral subtraction from fears, preoccupations, obsessions, morbid ideas, and this can be done even better in the usual surroundings than during isolation Even that bugbear of the physician, the patient's friends, can be converted into an aid instead of a hindrance, where intelligent people are concerned The chief appeal for the method of isolation is the power it gives the physician to "persuade" and reason with his patient But even this Levy believes of little use unless an opportunity is given the patient to practice the resolutions he forms, and as he cannot do this while isolated in bed, such treatment is injurious, for his best intentions will wither like a hot-house plant in the open when he has to face the stresses of his life One might as well learn to swim on a couch

Another fault of the "Weir Mitchell treatment of psychoneuroses, as often applied, is its stress on details the really important thing is that the patient thoroughly grasps the principles on which his disorder depends, and that he practice himself under the physician's direction in learning to avoid the pitfalls which life affords He must learn his own psychology, and the dependence of his bodily health on his mental state, but he must also learn that body and mind are only two sides of one thing, that bodily conditions react on his mental state, and that susceptibility to suggestions may be vastly increased by fatigue, dietetic errors or any cause of toxicosis of the neurons Even prolonged mental stimulation by the excessive interest which does not know when to stop may be a source of a neuronal state favoring suggestibility

The method of solicitude and sympathy merely reinforces the patient's belief in the validity of the idea for which sympathy is an implicit acquiescence Still more injurious is direct medical treatment of the apparent physical disorder which results from ideas For instance, a hysteric monoplegia (a paralysis of one limb induced by the patient's belief that it is disabled) should not be treated by the application of electricity or massage to that limb, or by the giving of an internal remedy which the patient is led to suppose is capable of removing such conditions It is bad practice,[37] too, to pretend to perform an operation on the patient who believes, for instance, that she is inhabited by a lizard she has swallowed Sometimes, it is true, a symptom disappears through the suggestion involved in such procedures, but it does so in a small proportion of cases only, is a pure chance, and does not touch the cause, while by ascertaining and removing the root we can generally cure permanently the present symptoms at least[40]

An illustration of the method is afforded by one of my cases of traumatic neurosis,[41] for this condition is merely the expression of an induced fixed idea of disability, which is recovered from as soon as the pathogenic idea is disposed of

Case 3—After bruising his back by a fall from a car, a railway brakeman remained for six months very lame, and the sensibility of the lower limbs appeared to be lost His tint had become sallow, and he was dyspeptic and emaciated, he was sleepless, sad and cried much The neurologic examination (reported with the case[42]) showed that there was no destruction of the nerve elements The disability was shown by psychanalysis to be a function of the false fixed idea, induced by the belief derived from his environment that such symptoms as he showed could and should follow such injuries as he had had One sitting sufficed to begin the correction of this false notion, and he himself completed the persuasion and was able to return to work in a month, as I had predicted

Beautiful examples of rational as opposed to empiric methods of treating hysteria are the following

Case 4—A woman, aged 28, whom I saw in February, 1911, with Dr Hardin, to whom she was referred by Dr Maphis of Warrenton, Va, in the preceding June had had a chill after which she cried The next day she felt very weak, and the next day she had *pain in* the knees, she thinks *only in* the left with hyperesthesia There was also, she says, tenderness of the lumbar spine, and later on in the groin and hip She was treated by massage, and for four months was relieved About Christmas time these pains recurred when her sister visited her There were then nausea and persistent dull pain in the knees which caused her to groan in her sleep

Examination was negative, except that there was great hyperesthesia of both knees and one arm Also the right abdominal reflex was absent, and the adductor reflex was exaggerated on the same side I decided that the case was psychogenic, and that afternoon attempted psychanalysis to seek the origin of the psychalgia I found two suggestive incidents one being the visit of a sister on the second occasion the other being the fact that when first attacked her brother had a severe hysteric spell He had consumption, which she feared Another fact perhaps significant was that she had been two weeks in a newspaper office during its change of ownership, alone with the man in charge much of the time

As she could stay in Washington only a short time I concluded that it would be better to remove the effects of whatever had been the source of the hysteric symptoms by psychomotor discipline than to try to pursue psychanalysis which might be unfruitful in the short time at her disposal

Method—As the least approach toward the patient's knee would set up a spasm of terror during which adductors, hamstrings and extensors went into spasm I began a course of gradual habituation first to the approach of a person's hand toward the knee, later to manipulation of the patellar region followed by pressure on it. A sister attended her in hospital and helped her to accomplish these exercises several times each day. In this way she taught herself in a few days to control the muscles around the knee joints so as to prevent them contracting when her knee was touched. The pain ceased when the spasm did, as it was in part maintained by the latter. Then her alarm vanished, as there was no reason for it, and she was satisfied that her pain lay in her own power to control. The dangers of prepossession by a fear, in conjunction with the mental vacuity engendered by lack of occupation, were explained to show the genesis of false fixed ideas regarding disease, and she was told how to avoid them.

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[37] Williams Tom A Le rôle du médecin etc Compt. rend congrès des neurologistes français à Lille 1906 Am Med., August 1905

[38] Levy Neurasthénie et névroses guérison définitive en cure libre Paris 1909

[39] Dubois Le traitement psychique de la psychonevrose Paris 1904

[40] Williams T A Chronic Visceral Pain Surg Gynec and Obst June 1912

[41] Williams Tom A Tr Congrès international des accidents du travail Rome 1909

[42] Williams Tom A Med Rec Oct 2 1909

She returned to Virginia in a week well, and has remained so for nearly two years.

Case 5.—A further case illustrating the effect of proper discipline is that of a barking, roaring and bowing tic removed in one day. The patient was referred to me by Dr. Thomas Charles Martin. He had been treated for rectal ulcer for some months. He had recently removed to North Carolina, but wanted to come back to Washington. It is possible that this had something to do with the development of his condition. I was asked to see him, because when he sat down he would utter a series of barks, while at the same time the trunk would go into a spasmodic flexion. When he was stripped, there were seen strong abdominal muscles and regular bowing of the whole body along with this barking, grunting noise.

Psychanalysis showed that these attacks had begun suddenly in North Carolina at 10 p. m. three months before. The significant fact was that he had eaten sandwiches which had been sent to him by his parents in Washington and that he had been thinking despondently before he went to sleep about how nice it would be to be in Washington. He was also thinking considerably about his intestines having been under treatment by lavage. The exact psychologic mechanism was not discovered, however.

Method.—I thought it better to remove the effects rather than necessarily to discover the details of the genesis of his tic. So I instituted a course of psychomotor discipline. The tic, which at first had come only when he lay down at night, had later occurred whenever he sat down also, and thus made life a burden. So we began by exercising in the sitting position. I placed him in a large chair, reclining, showing him how deliberately to contract the recti abdominis, and made him perform a series of respiratory movements, as well as the series of recti movements. After a few moments he became capable of contracting either the recti or the diaphragm. That being accomplishment enough for one sitting, he was asked to come back the following day. He went home and tried the exercise while recumbent at night. The result was that he came back next morning and said: "Doctor, I am cured. I did not have any spell last night." Two days later, however, he relapsed. But after another discipline, he remained well.

Thus it is simple to remove the effects in this rational way. It is so much better than the rough suggestion often attempted. For example, the last patient had been treated by electricity, which he was assured would remove his spasms. When this failed he was treated by direct suggestion. When this failed he was treated by "the most marvelous remedy known," a drug obtained from some remote country, which was guaranteed to cure. Thus, the most powerful suggestions failed in a case which was in origin suggested and conformed to Babinski's definition of hysteria, "susceptible of production by suggestion." A motor habit had been formed, and the removal of all habits requires reeducation of the patient's volition. Indeed it is only by its action on the will that suggestion ever succeeds.

Now, although hysteric symptoms are always psychogenetic and have a mechanism the knowledge of which enables the clinician to penetrate to their origin, yet hysterizability varies with bodily states,[43] so that the treatment of hysteria cannot safely be left to those laymen who have arrogated to themselves the title of psychotherapeutists by an assumption which is justifiable only to the minds of dualists and those who attach no validity to the old adage which becomes more and more true as our psychologic knowledge broadens and deepens, *mens sana in corpore sano*.

The application of the principles described in this article is shown in ten cases which I recently reported.[44]

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THE DIAGNOSIS OF TUBERCULOSIS OF THE KIDNEY IN VERY EARLY AND VERY ADVANCED CASES

PROGNOSIS AND TREATMENT *

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It is generally assumed, and I myself once cherished the conviction, that with every surgical tuberculosis of the kidney — even in the earliest stage — albuminuria must occur, and that one would therefore be justified in excluding the diagnosis of tuberculosis of the kidney when the examination of the urine for albumin gives a negative result. But of late years a series of observations has shown me that this is not the case, as we see some cases in which the albuminuria is intermittent, and others in which it seems to be invariably absent.

Among my cases, about 200 in number, I have established the diagnosis seven times in such circumstances.

In reality, cases of this sort are undoubtedly far more frequent, because just the belief of the necessity of albuminuria with tuberculosis of the kidney has surely resulted in most physicians not having thought of or searched for tuberculosis in such cases.

Case 1 is that of a man who, on account of albuminuria, was treated in a medical ward during nine months for chronic nephritis. The albuminuria having ceased, it was thought that the man was cured of the nephritis and he was consequently discharged. A day or two afterward he was admitted to my clinic, without question free from albuminuria, but, as was clearly substantiated, with an enormous tumor on the right side of the abdomen, which proved, at the ensuing operation, to be the right kidney which was completely destroyed by infiltrating tuberculosis, so that literally no kidney tissue was found, this being replaced everywhere by a cheese-like mass. No pus was found, the mucous membrane of the ureter was certainly very inspissated, but there was no sign of obliteration. This is, then, an interesting example of how the urine can, in extremely advanced cases, be free from albumin without closure of the ureter, apparently because all secreting kidney tissue is destroyed. But in most cases the absence of albuminuria has occurred where the tuberculosis of the kidney is of relatively recent date or is strictly limited. It is clear that such patients arrive in the surgeon's hands only when they present other conspicuous symptoms.

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[43] Williams, Tom A.: The Nature of Hysteria, Internat. Clin., 1908.

[44] Williams, Tom A.: Washington Med. Ann., January, 1912; The Post Graduate, June, 1912.

* Read in the Symposium on Renal Surgery and Pathology in the Section on Genito-Urinary Diseases of the American Medical Association at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

* Because of lack of space this article is abbreviated in The Journal. The complete article appears in the Transactions of the Section.

In a group consisting of three cases (Cases 3, 4 and 5) it was hematuria, with or without pains, which brought them to me The first case (Case 3) was very interesting partly because the symptoms had existed during five years, and partly because, even with the removed kidney under our eyes, the diagnosis was doubtful The patient was a woman of 30 years, who, five years previously, had suddenly begun to suffer from left-sided pains in the loins and from hematuria The hematuria lasted only for four days, but the pains continued during the following eleven months, the result being that she was daily treated with morphin at the infirmary where she lay During the following three years she was free from pain, but then the attacks of pain and hematuria recommenced No trace of albumin was found in the urine, and leukocytes were found only occasionally, while we did not succeed in proving the presence of tubercle bacilli At the operation on June 3, 1908, I found a whitish-yellow tumor, the size of a nut, protruding from the middle third of the kidney When the kidney was split, it was seen that the tumor mentioned consisted of pork-like whitish tissue which did not resemble the recognized aspects of tuberculosis, and, furthermore, the upper and lower kidney papillæ were found to be infiltrated with similar tumor tissues The diagnosis vacillated between carcinoma and gumma, but the microscope revealed typical tuberculosis

That this tuberculosis which so peculiarly resembled tumor did not involve albuminuria can be explained without any great difficulty. It is more difficult, however, to understand why Cases 4 and 5 showed themselves during a long-lasting examination to be free from albumin, because, in both cases, abscesses and miliary tubercles were found in the kidney at the operation In Case 4, that of a little girl 9 years old, the hematuria was severe but painless, and the only symptom left which could be relied on was the discovery of leukocytes in the urine, on the other hand, neither tubercle bacilli nor albumin were found In Case 5, however, the hematuria was associated with pains in the discharge of the urine, and, as a considerable tuberculosis of the prostate and ulcerations in the bladder were found — though no albumin — it was most natural to think that an ascending genital tuberculosis was in question, but it was not until, on catheterization of the ureter, leukocytes and tubercle bacilli were found in the albumin-free urine from the left kidney that suspicion was centered on this

In Cases 2 and 7 it was only the attacks of pain occurring in the region of the left kidney which brought the patients to me All that I had whereon to found my suspicion of tuberculosis in Case 2 was the pus-celled contents of the urine, without my being able simultaneously to prove the presence of microbes of any sort In Case 7 the diagnosis was rendered still more difficult by finding in the urine of the bladder, in addition to the pus-cells, some Gram-positive coccobacilli It was only on catheterization of the ureter, when it appeared that the urine from the left kidney contained pus-cells without microbes, that a suspicion of tuberculosis was aroused, and then, by persistent investigations, I succeeded in finding tubercle bacilli Finally, Patient 6 was one on whom I had several years before performed a right-sided castration for tuberculosis in the testis and epididymis, and who was now admitted with tuberculous left-sided epididymitis There was no albumin in the urine when he was admitted, but as, later on, a little was occasionally found, I made a cystoscopy, and found a small ulceration in the bladder medially before the orifice of the right ureter, and as, on catheterization of the ureter, leukocytes were found in the urine of the right kidney, an exploratory lumbar incision was made At the operation I was surprised to find the entire kidney degenerated by small cysts, without there being any macroscopic sign of tuberculosis, while on the other hand, a stricture was found in the ureter

After the removed kidney had been cut through, only the aspect of a cystic kidney was to be observed macroscopically, but, scattered in this, the microscope revealed small tuberculous foci

Then there are the cases in which the urine contains visible pus and in which the diagnosis is pyelitis, and the patient is treated with salol, boracic acid or similar remedies But even the symptoms of cystitis do not by any means always bring the physician onto the right track, the only result is that he often, without a more thorough examination as to what form of cystitis he has here to deal with, blindly attacks, so to speak, the disease with the ordinary cystitis remedies, such as nitrate of silver injection, which is exceedingly painful, entirely useless, and often apparently aggravates the cystitis These patients are in a still worse plight if, for a short time previously, they have been suffering from gonorrheal urethritis, because the cystitis is then taken to be gonorrheal and treated with protargol or, what is still much worse, with the Janet daily lavage, a solution of permanganate of potash, which appears to have a particularly injurious effect on the mucous membrane of a tuberculous bladder, this treatment, at all events, appears to have had a fatal influence in two of my cases

All these regrettable errors in diagnosis might be avoided if only physicians fully realized that one ought never to begin the treatment of albuminuria, pyuria or cystitis without first having subjected the urine, sterilely taken from the bladder, not only to a chemical but also to a microscopic and bacteriologic examination

I am quite aware that it is maintained to be very difficult to prove the presence of tubercle bacilli, even in the newest handbooks, such as Kuster's and Wagner's, it is stated that attempts to show the presence of tubercle bacilli in diseases of the urinary tracts are successful in only 10 to 20 per cent of the cases With reference to these statements, I can only say that the authors must have adopted unfortunate methods or have not persevered long enough, for when I look over the statistics from all my cases it appears that the assured presence of tubercle bacilli has been successfully shown in 80 7 per cent of these cases The method which I have used with such good results is that of Forsell, according to which one lets the aggregate urine of the twenty-four hours precipitate in a separator The lowest portion of the precipitate which contains the tubercle bacilli is separated, and can then in addition be centrifugally treated before being put under the microscope

For a practitioner all such circumstantial methods, as a rule, are entirely unnecessary, for simple microscopy with ordinary microbe coloring is sufficient to give him the diagnosis, if he finds pus in the urine but no microbes, the diagnosis of tuberculosis is almost certain the case is at least so suspicious that the patient must at once be sent to a place where a special examination by experts can be undertaken, for in all other suppurative kidney affections we find numerous easily colored microbes in the urine

The use of ureter catheterization, more especially in tuberculosis of th [illegible] many enemies [illegible] no doubt princ [illegible] ization is so [illegible] time, but a [illegible] sibly sound ureter, and even if we maintain that this risk, as far as experience shows us, is very slight, yet its existence cannot be denied, and it would be desirable if we could manage with cystoscopy alone, or with segregators According to my experience, this, however, is entirely impossible Cystoscopy pure and simple is always uncertain, in some cases we can, of course, see undoubtedly purulent urine flow from the orifice of the ureter and thus be tolerably certain of the kidney in question being affected, but we are then left entirely in the dark as to the state of the other kidney, for a macroscopically clear urine is not by any means synonymous with a normal urine What cystoscopy, generally speaking, should enlighten us about are alterations in the shape of the orifice of the ureter, swellings, miliary tubercles and ulcerations around the diseased orifice of the ureter But you will find that the tuberculous alterations in the bladder in only a minority of the cases are localized around the diseased ureter In some cases you will see that the bladder tuberculosis, in a directly misleading manner, has localized exclusively round the orifice of the sound ureter You will find cases in which both kidneys are affected, but both ureteric orifices are free from alterations, or in which the tuberculosis has localized round the orifice of the one ureter, but in by far the greatest number of cases you will see that bladder tuberculosis in one-sided kidney affection is spread over both sides or halves of the bladder, sometimes over the whole of the mucous membrane of the bladder

Therefore, this method ought not to be allowed to take the place of, or be put on a level with, ureter-catheterization, which is the only bloodless method which can give us certain knowledge of the state of the kidneys It is necessary to warn against the use of segregators, which are so tempting because of the technical simplicity of the method which any one can apply, while ureter-catheterization requires special training and practice

The examination of the urine taken from each kidney must be undertaken with great care and judgment, it must be subjected to a thorough chemical, microscopic and bacteriologic examination

At the Congress of Surgeons held in Berlin in April, 1905, I, for the first time, drew attention to the importance of diagnosticating toxic albuminuria, and in my introductory address to the discussion on nephrectomy in kidney tuberculosis, I mentioned five such cases in which, in spite of a fairly pronounced albuminuria from the other kidney, I had extirpated the tuberculous kidney, and had afterward seen the albuminuria disappear in the course of a very short time, the patients being cured To these, from subsequent personal experience, I can add eight new cases

The double lumbar incision has been used by me in thirty of 166 cases, and I have never lost a single patient by this method In twenty-four cases I ascertained the one-sidedness of the disease, which could not have been ascertained by any other means I removed the diseased kidney, and in all cases recovery was the result, in one case I found the kidneys healthy, in six cases I ascertained the double-sidedness of the disease, in four of these I closed again without proceeding further, in two cases I undertook ureterostomy to procure relief from pains and to arrest the process of ascending tuberculosis

One of these cases is of considerable interest A girl, 26 years of age, was brought to my ward in a very wretched state The bladder was found to be completely infected by typical tuberculosis, the mucous membrane around both the ureter orifices was ulcerated and the insertion of the catheter was impossible into either ureter on account of stricture By palpation the right kidney was distinctly found to be somewhat enlarged, the left kidney could not be felt, but by means of Roentgen rays a big oblong shadow was discovered corresponding to the left kidney The picture could not decide the question as to whether this was a large calculus or, what I was most inclined to assume, a calcified tuberculous kidney I decided on exploratory lumbar incision on the right side, whereby I made the following interesting discovery The appearance of the kidney itself was normal, but the pelvis had expanded to the size of a Tangerine orange, the ureter was distended to the thickness of a finger, the upper serpentine portion of which was thin and transparent, while the ureteric wall from about the middle was found to be at an increasing rate thickened by interstitial ureteritis I then, in the first instance, brought the ureter forward and formed a ureterostomy by a longitudinal incision on the outer side of the ureter I carried a drain up into the pelvis and through it drew off a perfectly clear urine, which was free from albumin, and which microscopically contained only a few leukocytes By sounding the distal portion of the ureter I found an exceedingly narrow stricture, which commenced a few centimeters above its opening into the bladder The urine was carried through a drain, which had been inserted into the pelvis, down into a glass by the side of the bed, and during the following days it transpired that the other kidney did not yield any urine at all but only some tuberculous pus In the course of a few weeks I removed the left kidney, which had been completely transformed into a tuberculous putty-like substance The ureter fistula was kept open until the bladder tuberculosis was cured by phenol (carbolic acid) treatment, of which I shall speak later on The passage through the ureter was then reestablished, and the kidney has now for six years officiated satisfactorily

In two cases I punctured an abscess in the kidney as large as a hen's egg

I have, ever since 1892, systematically undertaken quantitative analyses of urea with all my kidney patients prior to operation, and found that a normal secretion of urea is a safe criterion of a sufficiency of kidney tissue capable of functionating, but that, on the other hand, nothing can be gathered from a reduced secretion, inasmuch as the latter directly or indirectly can be due to the diseased kidney — directly by a purely reflex effect on the secretion of the sound kidney (renorenal reflex), indirectly by the disease actuating the functions of the whole organism I have shown this in a whole series of cases in which the secretion of urea, after the removal of the tuberculous kidney, from being diminished, quickly rose to normal height While a normal secretion of urea imparts a very important and satisfactory knowledge, it is, on the other hand, very risky to adduce from a slighter secretion of urea that both kidneys are inadequate, this may serve as a warning to proceed cautiously, but nothing beyond that

With regard to all the rest of modern kidney-function examinations, I have shown that these are still more unreliable than the urea analysis, for while the latter misleads only by a negative result, both chromocystoscopy (Achard's methylene-blue test, Voelker's indigo carmin), cryoscopy and the phlorizin method are capable of misleading by positive as well as negative, results I have, therefore, entirely given up these artificial and complicated methods in favor of the simple and rational quantitative urea analysis, which I make by the aid of Esbach's ureometer

In recent years, the conception of the prognosis has become so optimistic that several authors maintain that early cases of kidney tuberculosis ought to be treated conservatively — by dietetic measures and with tuberculin, while nephrectomy should be allowed only in very advanced unilateral cases

In my opinion this doctrine is wrong and very dangerous First, because we never know whether the case is early or advanced, malign or benign Behind the slightest, most veiled symptoms the most advanced, the most malignant tuberculosis may be hid, as recently proved by some of my cases Second, there exists no convincing case of tuberculous kidney cured by conservative treatment As now the statistics have established that we, by nephrectomy, can save 75 per cent of all patients operated on, it seems quite clear that nephrectomy is indicated as soon as we have diagnosed a unilateral kidney tuberculosis In spending the time on conservative treatment you run the risk of spreading the tuberculosis to the bladder and to the other kidney, and thereby destroy the possibility of a radical cure

If we should define the position of the question at the present moment, I consider that, generally speaking, I can maintain that the possibility of a radical cure is dependent on two conditions (1) that the point where the tuberculosis originates within the urogenital organs can be radically removed and (2) that at least the one kidney is sound

As far as the descending tuberculosis of the urinary tract is concerned these two conditions of course go together if only the one kidney is attacked there are chances for a cure by nephrectomy With ascending urogenital tuberculosis both conditions have to be reckoned with, inasmuch as the tuberculosis here originates in the genital organs but often secondarily spreads to the kidneys This double and complicated state of affairs must at the outset make it probable that the prospects of a cure would be considerably slighter with ascending urogenital tuberculosis The prognosis for ascending urogenital tuberculosis is much more serious than for descending, and this is partly due to the fact that while primary kidney tuberculosis in the great majority of cases is one-sided, secondary kidney tuberculosis is just about as often double-sided as one-sided, and partly to the hopeless course which a breaking through of the tuberculosis from the prostate to the bladder and urethra most frequently takes, attended by extravasation of urine, fistula formations, etc

If, on the other hand, only the epididymis, vas deferens and a single kidney are attacked, there is every prospect of cure through the removal of the epididymis and the diseased kidney, even if the bladder should be also attacked This latter complication, up to a few years ago, was considered so serious that it was looked on as an absolute contra-indication to operation We know now, through numerous instances, that a slight bladder tuberculosis is frequently cured spontaneously when the place where the tuberculosis originated is removed but even with extensive bladder tuberculosis, which excludes a spontaneous cure, there is every chance of bringing about a cure by means of treatment with a 6 per cent phenol solution with which up to the present time I have cured thirty-four patients

In all the cases in which, by means of the diagnostic aids I have just described, I have proved that only the one kidney was attacked, I have removed it by nephrectomy In all I have performed 145 nephrectomies for kidney tuberculosis with but seven deaths — that is, 4 8 per cent mortality There were two deaths in the first fourteen operations, which were performed in 1901 — a 14 2 per cent mortality — while there have been only five deaths out of the 131 nephrectomies performed after 1901, that is, 3 8 per cent

I use a long slanting lumbar incision, open the fat casing of the kidney at the back, loosen with great care by means of my rubber-gloved hand the kidney from its bed and possible adhesions, examine and palpate it minutely in order to verify the diagnosis, then draw the ureter forward on my bent left forefinger, tie it up in two places with strong silk thread in order to burn it slowly through with a red-hot thermocautery between the silk threads about 3 cm below the entrance into the pelvis I then isolate this from the vessels in the pedicle, which is tied up with strong formaldehyd catgut, after which the kidney is removed by cutting through the vessels The peripheral end of the ureter is fastened to the skin 1 cm from the wound-line, whereby I insure the raw surface of the abdomen against any possibility of infection from tuberculosis Formerly, when I removed as much of the ureter as possible and lowered the stump, the latter often became the starting-point for an exceedingly dangerous diffused tuberculosis in the retroperitoneal tissue and in the abdomen

In case one or both the epididymides are attacked, an extirpation of the epididymis is performed at the same or a subsequent operation, with the preservation of the testis if the latter be not attacked As to the severed vas deferens, it is treated in a similar manner as was the ureter it is sewed forward to the scrotal skin, where it, when the wound is otherwise healed, is kept open as a safety-valve for the tuberculous secretion, which might be in the peripheral parts and in the vesiculæ seminales I have adopted this method in connection with nephrectomy in a large number of cases and always with good results If there is tuberculosis of the bladder I wait some time after the nephrectomy to see whether the bladder tuberculosis will heal spontaneously, which I ascertain by performing cystoscopy every fourteen days

In fourteen cases spontaneous healing resulted simply in consequence of the source of the infection having been removed with the kidney, but in the remaining thirty-four cases there was no such spontaneous healing Sometimes, contrary to what is generally the case, quite a small tuberculosis was seen to spread incessantly, assuming a very vicious character, but in these cases the bladder tuberculosis was, as a rule, already far advanced when the patient came into the hospital It is these cases that I have subjected to local treatment with a 6 per cent phenol solution This treatment, which to begin with is undertaken every other day, consists in first washing out the bladder with sterilized water, and then injecting 50 c c of freshly made, warm, 6 per cent phenol solution, this is allowed to remain for two or three minutes and comes away as a perfectly milky fluid These injections are continued until the phenol lotion comes away fairly clear

The effect of this treatment, which, as a rule, manifests itself astonishingly quickly is shown by the cessation of the pus secretion and by the clearing of the urine By degrees, as the urine becomes clearer the injections are made at longer and longer intervals, and are discontinued when it has been shown by cystoscopy that the mucous membrane of the bladder is healed This we can see by the ulcerations in the cy[illegible]ic picture being replaced by sm[illegible]r-of-p[illegible]atricial areas With wide [illegible]alo[illegible]eeks treatment is, on an average, necessary If the patient and the physician have the perseverance to carry through the treatment, a cure is certain, subject to two conditions (1) that the source of infection is removed, and (2) that the tuberculosis is confined to the mucous membrane and has not spread through the walls of the bladder It is only subject to these conditions that the adoption of this treatment can be at all recommended The first patient treated in this way, and in whose case the tuberculosis was of an unusually vicious nature and extending over the whole of the bladder, has now been well for five years

I have of late gone still further in my attempts to save apparently hopeless patients, as, for instance, in the case I have already mentioned while speaking about the diagnosis, in which the double lumbar incision showed me that the tuberculosis had proceeded from the completely destroyed left kidney, traveled through the ureter to the bladder, the mucous membrane of which was completely ulcerated, and from there had again ascended to the right ureter and there produced stricture and distention In this case I performed extirpation of the left kidney and lumbar ureterostomy on the right side, by doing this I prevented the tuberculosis from ascending to the other kidney, which was still sound I kept the fistula open until I had cured the bladder tuberculosis by phenol treatment and dilated the ureter stricture The passage through the ureter was then reestablished, and the patient is still, six years after the operation, living and free from pains of the bladder, the right kidney officiating satisfactorily

As a palliative operation I use and strongly recommend ureterostomy in cases of double-sided ascending kidney tuberculosis in which stricture with distention of the ureter and pelvis causes great pain In such cases we not only relieve the patient completely from pain but, by establishing a free outlet, arrest the upward progress of the tuberculosis, and prolong the patient's life Neither is it probably altogether out of the question that, at an early stage, an ascending kidney tuberculosis can be cured in this manner Formerly I used a catheter or drain introduced into and fixed in the ureter, which through the bandaging was carried to a concave-convex bottle which was tied to the lumbar region by a belt, but the frequent escape of the urine by the side of the catheter and the drawbacks resulting therefrom led me to construct a bandage consisting of a small silver capsule fitted with a rubber ring, which, by means of an elastic girdle round the abdomen, is kept tight round the ureter fistula, and from which a small silver tube through a drain leads the urine into a urinal

I have already mentioned that the group of cases in which tuberculosis is primary in the prostate and from there directly attacks the urogenital organs invading the urethra and the bladder gives an exceedingly bad prognosis, on account of extravasation of urine and the formation of abscess and fistula in the connective tissues of the pelvis Yet in some cases it is possible to obtain partly curative, partly palliative, results through operative methods

Where tuberculosis of the prostate has as yet only attacked the urethra, while the bladder is sound, I perform suprapubic cystostomy with insertion of a Pezzer catheter and then extirpate the prostate, removing in connection with the latter the diseased portion of the urethra

As a palliative measure, I have seen excellent results from suprapubic cystotomy in cases in which a radical operation has no longer been possible

THE USE OF TUBERCULIN IN THE TREATMENT OF SURGICAL UROGENITAL TUBERCULOSIS *

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My paper is not a didactic or an authoritative scientific exposition of the subject from the point of view of the tuberculin therapist but rather a synopsis of personal experience and opinion from the point of view of the genito-urinary surgeon

It is sometimes stated that the modern surgeon is so filled with scientific enthusiasm that he loses sight of the human side of his work and only thinks of his patients as cases I do not believe this is true except in very exceptional instances I want to emphasize this fact because in tuberculosis, to an extent that is equaled in scarcely any other disease, the social, economic and human factors are of very great importance This is so because tuberculous patients are, as a rule, young persons who are, or should be, doing each his or her share of the active work of the world Also because of the often wide-spread destruction of tissues or organs and yet, unlike in cancer, the disease is not necessarily fatal even though total extirpation be proved impossible

There have recently come to my notice two excellent papers, one by Dr Paul Thorndike of Boston on renal tuberculosis, and one by Dr J D Barney of Boston on tubercle of the epididymis Both of these papers are entirely from the point of view of operative surgery In both the use of tuberculin is mentioned Dr Thorndike believes renal tuberculosis should never be temporized with and Dr Barney only briefly mentions any other than operative treatment In every other way I entirely agree with the sound conservative opinions expressed in these papers It seems ridiculous to believe that tuberculin therapy can heal advanced lesions with considerable breaking down of tissue, nor can it ever be expected to absorb considerable collections of pus Where there is an abscess or much necrotic material surgical intervention is essential Where a kidney is a mere sac full of pus it would be a foolish waste of time to do anything but remove it Where the epididymis or seminal vesicle or prostate is a broken-down mass of purulent necrotic material the knife is the most conservative remedy Any other course puts the patient's life in jeopardy and is expecting too much resistance to infection of the general organism On the other hand, there are frequent conditions in which either all the operative surgery has been done which it seems wise to do or in which, for other reasons, operation should be either postponed for a time or is contra-indicated altogether Perhaps I can best illustrate this by specific instances

Case 1 —R B, male, aged 20, in February, 1911, began to have frequency of micturition while at college in Berkeley, Cal The patient was examined by Dr E McConnell, of San Francisco, who found evidence of tuberculosis of the right kidney and bladder Bacilli were found in the urine In May, 1911, the patient consulted me in Portland and I began treatment with tuberculin Immediate and very marked improvement resulted Koch's Old Tuberculin, as put up by Mulford, serial dilution No 1, was the preparation used Very minute doses were administered without any attempt to reach the limit of tolerance In fact, every effort was directed to give so small a dose that there should never be any specific

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* Read in the Symposium on Renal Surgery and Pathology in the Section on Genito Urinary Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June, 1912

reaction I believe this to be of great importance In August, 1911, the patient returned to college As it was important for him not to have his course of study interrupted, this was the justification for not at once taking out the offending kidney Also we were encouraged to continue the tuberculin on account of the extremely favorable result of a few weeks' treatment in the spring and early summer of 1911 On his return to Berkeley he consulted a specialist in pulmonary tuberculosis I believe that, in the light of later developments in the case, this was a mistake The patient, however, seemed to have great faith in this specialist and for a time did fairly well Then the specialist tried the plan of giving him tuberculin in increasing doses up to the limit of tolerance Occasionally this limit was passed and the boy had fever, chills and other evidences of an overdose However this method may succeed in pulmonary cases I do not know, but I am convinced it will always make surgical patients worse I believe the safest guide, as I have repeatedly said before in discussing this subject, is the irritability of the bladder An overdose is shown by increased pain, frequency and bladder irritability far sooner than the point of the production of constitutional symptoms Of course, bladder symptoms are not invariably present in renal cases It soon became evident that the boy was getting worse. In November, 1911, he returned to Portland and I removed the right kidney Since then his general health has gradually improved Just after Christmas, 1911, he went to visit his relatives and I have not seen him since He writes that his condition is good

I report this case not as evidence of the triumph of the use of tuberculin but because I believe, though I may be mistaken, that the unwise administration of tuberculin by the method of dosage almost or quite up to the limit of tolerance actually precipitated an early nephrectomy which might have been deferred until a more convenient time or possibly avoided altogether

There is another class of cases which are very troublesome to both physician and patient In women we frequently see cases of painful and frequent micturition In those cases in which gonorrhea can be absolutely excluded and in which there is no colon bacillus infection we must seriously consider tuberculosis We must also exclude traumatism of the urethra from excessive coitus Modern investigation has led to the conviction that primary bladder tuberculosis is very rare Many of these cases are undoubtedly dependent on renal tuberculosis, although there are apparently a few exceptions

Case 2—In April, 1910, Miss S, aged 30, single school teacher, consulted me She said that for years she had had attacks of painful frequency of urination Latterly they had been of longer duration and much more troublesome Examination showed a normal urethra except for some injection and great sensitiveness at the inner meatus and this seemed continuous with a neck of the bladder irritation There was absolutely no evidence of gonorrhea in the past or present history Cystoscopy showed a normal bladder except for the injection of the vessels at the bladder neck The ureter orifices were normal. Ureter catheterization brought normal urine from both kidneys There were no subjective symptoms of kidney disease The bladder urine, on the contrary, contained a slight amount of pus and tuberculosis was suspected but the bacilli could not be demonstrated The application of nitrate of silver and dilatation of the urethra proved effective in giving relief for a time This patient's work is exacting She teaches the youngest children in a large public school Her urinary frequency increased daily from Monday to Friday The Saturday Sunday holiday gave a chance for slight betterment of symptoms She is absolutely dependent on her work She is unfitted for other employment It is therefore imperative that she continue her work As I said no evidence has been brought forward of kidney disease In January, 1911, tubercle bacilli were demonstrated in the urine Tuberculin treatment was begun and persisted in since There has been marked benefit apparently attributable to this treatment She is very susceptible to an overdose and only 0 005 c c of Old Tuberculin No 1 can be given without bladder reaction This means, in my opinion, delay The good results of tuberculin are undoubtedly more quickly apparent in a patient who can take a somewhat larger dose than this In the course of time, however, her improvement has been quite marked In what way could operative surgery have been of benefit in this case? Possibly, as Dr Thorndike says in his monograph above referred to, the condition will remain about the same for years and later a renal disease will show itself and eventually nephrectomy will have to be done Time alone will tell

Case 3—I have previously reported the case of a nurse with a very extensive generalized tuberculosis of the abdominal viscera including the bladder and intestines After two years treatment with tuberculin (Koch's Old Tuberculin) in very small doses she entirely recovered and now, four years after beginning treatment, she is well, back at her work and showing no discoverable evidence of disease

Case 4—The patient, with tuberculosis of the genital tract, was first seen in 1908 At that time he showed very advanced disease and was operated on to eradicate as much disease as possible Afterwards he was treated for a few weeks with tuberculin He reported to me in February, 1912 He was apparently perfectly well There was no evidence of any disease He felt strong and well and had gained weight

Another class of cases are those with bilateral renal disease of an advanced type or those showing pulmonary infection in addition to the urinary tuberculosis These cases are hopeless Neither operation nor tuberculin nor a combination of the two will cure If any such patient gets well it is in spite of and not because of treatment I have never seen such a patient recover Sometimes one will seem to do well for a time but eventually, in my experience, some fatal lesion develops

I do not think treatment of any case, in any stage, by tuberculin, is as satisfactory as one could wish it to be It is just about on a par with bacterin treatment of any other condition Eventually someone will discover a better method but in the meantime a great deal may be accomplished by using the various preparations of tuberculin I have tried to show that they are mainly aids to surgical or other treatment and that, even in competent hands, they may be very disappointing If tuberculins are used without good judgment as to dosage much harm can be done, in fact, often irreparable harm The exact preparation chosen I believe largely a personal matter One surgeon will get good results with O T, another with B E, and still another with some other preparation It depends on which the surgeon is most used to working with, because, at all times, in every case, it is necessary to be cautious, patient and watchful and to be guided by the results of personal experience I have tried the opsonic index as a guide but believe that it merely introduces another element of uncertainty and error without rendering compensating advantages The symptoms of the patient, carefully observed and properly interpreted, are guide enough There are almost as many ways of handling tuberculin as there are physicians who use it It would waste your time if I should tell you any of my tricks of technic because, although they suit me, your own doubtless fit you better and accomplish the same result in the end

Seventh and Yamhill Streets

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS ROVSING AND WHITESIDE

Dr William T Belfield, Chicago At a clinic given to the American Uro[illegible] tion in Chicago, in September 1911, I presented [illegible] wit[illegible] bercul[illegible] male treated with [illegible] h during the past six years has convinced me that in genital tuberculosis the knife has no place, except to evacuate débris Following is a report of one of the six cases I showed at that time

A man, aged 27, had had one testis removed for tuberculosis The remaining epididymis was three times as large as the testis, the urine was thick, containing pus, blood and tubercle bacilli, and he urinated every half hour day and night He had lost 18 or 20 pounds in weight The advice which he had received from excellent surgeons was to have the remaining testicle, the prostate and the seminal vesicles removed He received simply tuberculin as treatment, being unable even to secure the benefit of outdoor life When I showed him to the American Urological Association a year later the man was apparently as well as any who inspected him, the urine clear, the fistulas had healed and his weight had increased The other cases were not so advanced, but the effects of treatment were equally good These are illustrations of the experience which has convinced me that the knife has no place in the treatment of genital tuberculosis in the male, except for the removal of débris I would not, with my present experience, substitute tuberculin for the knife in the treatment of tuberculous kidney

Dr **Hugh H Young**, Baltimore Dr Rovsing's method of treating the ureter is somewhat unique I would like to ask whether he treats the ureter internally at all after the operation, whether it is necessary to treat the ureter while treating the bladder, and whether he attempts to have the fluid from that ureter come out through the wound rather than through the bladder while he is treating the bladder with the phenol (carbolic acid) solution It seems to me that after excision of a tuberculous epididymis it is extremely important to bring the vas out through the groin, to inject it with phenol or iodoform, and to leave it to drain as long as possible. We have followed Dr Rovsing's work in regard to the phenol treatment and have not obtained the results he has, I think this is because we have not persisted and done it as frequently as he has We are perhaps frightened by the pain caused the patient I do not believe I can report any remarkable results in renal tuberculosis Certainly in other forms of genito urinary tuberculosis, particularly if localized, we may sometimes get brilliant results

Dr **Guy L. Hunner**, Baltimore If we could get the profession at large to appreciate that, if there are a few leukocytes in the urine of a patient with bladder symptoms, and no culture can be grown from the urine, we can almost safely assume that that is a case of tuberculous kidney, it would go a long way toward simplifying the treatment of this disease

There are a few cases in which there is thickening of both ureters, and with care and patience, we can usually determine which of the ureters is actually tuberculous and which is suffering from interstitial thickening from absorption upward from the bladder I have had three cases in which I could not catheterize the supposedly good side because of this interstitial ureteritis I was fortunate enough however, to be able to catheterize the bad side, and by washing out the bladder thoroughly and collecting the urine I got a fairly good idea of what the supposedly good side was doing operated in spite of this thickening at the lower end of the ureter, and in each of the cases had a perfect healing of the ureteritis and a disappearance of the cystitis

Dr **Thorkild Rovsing**, Copenhagen I ought to have said in my paper that I treat the ureter very often by injecting phenol solution through the ureter In most cases it is astonishing to see how it closes up without any treatment, the walls growing together and the tuberculosis healing with building of fibrous tissue

I keep the ureter open until the bladder is cured to save the patient the pain involved in voiding urine The urine would irritate, and it is an enormous relief for the patient to be free from that until the bladder is healed Therefore, I recommend in hopeless cases in which the patient has dreadful pain from the ulcerations in the bladder a ureterostomy, because it does away with all the pain There is no more need to pass the water through the bladder, and therefore there are no more pains

DECAPSULATION OF THE KIDNEY*

D S FAIRCHILD, M.D

CLINTON, IOWA

During the past few years a great number of decapsulating operations have been performed on the kidneys for the relief of diseases of these organs The limited resources of medical treatment have called the attention of surgeons to these organs in a special way and have led to surgical procedures which have very little scientific foundation for the undertaking It therefore follows that the merits of the operation can be determined only by the study of a large number of cases and not by any process of abstract reasoning

It would not be fair to say that the work has been altogether empirical The pathologic considerations which have led to decapsulation and incision of the capsule and of the kidney itself have rested on the assumption that freeing the capsule or incising the kidney has a modifying influence on the circulation of the organ and thus brings about an improved nutritive process leading to an ultimate restoration of the kidney to the normal or to relief of the organ from a pressure to the delicate kidney structures whereby its function is resumed and recovery follows, or in less severe and in more chronic conditions the structure of the kidney is saved from damage It may easily be assumed that considerations like these have influenced surgeons in undertaking decapsulating or decompression operations

Reginald Harrison of London appears to have been the first to undertake to relieve the intracapsular pressure of the kidneys by a simple incision in albuminuria, hematuria, anuria, pains, etc , of the inflamed kidneys This was in 1878 His favorable results induced other clinicians to attempt to improve the disturbed functions of the kidneys, improving urination by nephropexy, loosening adhesions, and by ureteroplastic operations

Le Dentu in 1881 performed a splitting of the capsule of the kidneys to allow the parenchyma of the kidney more expansion

Following the deliberate clinical work of Harrison and of Le Dentu, other workers undertook to show experimentally what changes actually occurred so far as the kidneys themselves were concerned N H Gifford,[1] in experimental work on decapsulation of normal rabbits and dogs, of dogs with induced nephritis and of dogs with infarcted kidneys but with additional work thrown on them, found the following conditions In all of his cases the entire thickness of capsule over two-thirds of surface, a certain amount of intracapsular tension in undecapsulated kidneys — normal or nephritic — shown by immediate increase in decapsulated kidneys up to one month after, a decrease to normal complete at six months, congestion of intertubular vessels of cortex, casts three to five days after the operation, no change in renal epithelium after decapsulation, a new capsule very vascular at first two to four times the thickness of the old marked at end of eight days In six months return to normal new capsule, in part from retroperitoneal connective tissue, also intertubular connective tissue, no new blood-vessels anastomosing with those of the kidney

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* Read in the Section on Genito-Urinary Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912.

* Because of lack of space this article is somewhat abbreviated in The Journal. It appears in full in the Transactions of the Section and in the author s reprints

[1] Gifford N H Experimental Decapsulation of the Kidneys Div Surg., Med School Harvard Univ Boston 1903-04 Experimental Decapsulation of the Kidneys, Boston Med and Surg Jour , 1904 cli, 37

G Herxheimer and W Hall[2] from animal experiments reach the following conclusions

1 After decapsulation the capsule forms anew and becomes thicker than normal
2 There is no anastomosis with the surrounding tissue
3 Animals stand the decapsulation without any bad effect
4 Anatomically or clinically no bad effects follow decapsulation

J H Zaaijer[3] from animal experiments with decapsulation of the kidneys and consideration of the functional value of the new-formed capsule, concludes

> Four weeks after decapsulation of the kidneys in rabbits the new capsule anastomoses have a lesser value than in the non decapsulated kidney, but locally they may have a greater value and especially on those points where the kidney was deeper incised or injured.

Thelemann[4] in a summary on decapsulation of the kidneys made experiments with animals and comes to the following conclusions.

> The decapsulation of the kidney does not effect a pernicious influence on the parenchyma of the kidney A new capsule is formed in a short time Whether the vascularization of the new formed capsule is increased or not cannot be definitely decided In the milder cases recovery ensues, the serious cases end fatally

Prof R Harrison in his original paper preferred incision to decapsulation as it appeared to be more rational and was followed by better results I presented the same views[5] in a later communication on the same subject In support of this, M Zondek[6] in discussing decapsulation and scarification of the kidney at its clinical value proposes the scarification as superior to decapsulation He makes slight incisions in the capsule and cortex and recommends this operation for hematogenous abscesses

The observers thus far cited in relation to the histologic influence of decapsulation or incision on the kidneys do not find any harmful effect on the kidneys and the evidence furnished by animal experiments seems to show in an affirmative way that results of a beneficial nature may be effected at a time when a decompression of the kidneys may be necessary, even if it is shown histologically that the capsule is restored practically to its former condition

In opposition to the above citations, Stern[7] of Dusseldorf writes of changes in the kidney after removal of the capsule From experiments with animals the following are his findings

> Six or seven days after the decapsulation of the kidneys in rabbits, the connective tissue shows a new growth in a broad layer Kidneys injured by the operation showed deep scars in the tissue In two cases at autopsy a strong connective tissue layer was noticed in place of the removed capsule In serial section, microscopically a transition of capsule into renal vessels, as assumed by Edebohls, could not be found The primary disease in the one case was interstitial, in the other, probably luetic, nephritis was more developed in the decapsulated kidney than in the non decapsulated

Stern considers it his duty to dissuade practitioners from this decapsulation, according to his experiments with clinical subjects in cases inclining to new formations of connective tissue In other cases of nephritis the lessening of pressure on the kidney may cause an improvement, but the total decapsulation has yet to be determined Stern also says that changes occur in the kidney after removal of the tunica propria He reports from animal experiments that no cure was effected, improvement was observed in three cases, but the animals died in eight weeks and the others two weeks after the operation

These experimental and pathologic observations are helpful in predicating the class of cases in which a decapsulating operation should be made, but the final determination must be based on clinical results My own opinion is that we shall find that experimental findings and clinical results will run very close together To reach some definite conclusions in relation to the value of decapsulation of the kidneys in certain forms of kidney disease, a very voluminous literature was examined What has been written on this subject was quite beyond my expectations and it is quite possible that not a little has been overlooked, and some perhaps duplicated

The study of the literature on decapsulation of the kidneys quickly shows that a consideration of the nature of the lesion in the kidney is of the utmost importance in determining the value of decapsulation The almost uniform failure to produce any good results in chronic degenerative changes of the kidney led me, as far as possible, to classify the diseases under heads which might include affections of the kidneys in relation to which an argument could be offered in favor of the operation

DECAPSULATION OF THE KIDNEY IN ECLAMPSIA

I have undertaken first to present such arguments as the literature furnishes on decapsulation of the kidney in eclampsia I feel warranted in bringing this branch of the subject before this Section in view of the fact that there does not appear to be any line of demarcation between the effects of the operation on kidneys of a patient suffering from eclampsia and those of a patient suffering from any acute congestion of these organs, and that, so far as our knowledge goes, the benefit derived is from the immediate relief of congestion

Sippel[8] concludes that decapsulation does not exert a direct vasodilating effect, it presumably relieves a certain pressure on the veins and thus improves circulation and diuresis Sippel[9] also says in relation to decapsulation and splitting of the kidney in eclampsia that in toxic kidneys decapsulation alone is sufficient If the internal pressure be much increased a splitting of the kidney may be necessary, according to the degree of tension Sippel assumed that the escape of the edematous fluid from decapsulation restores the circulation in these capillaries Gminder[10] doubts the correctness of this theory because the escape of such a serum has never been observed Nicholson[11] is also of the opinion that decapsulation drains blood directly from the engorged venous plexuses of the anuric kidney and that this relief in the venous counterpressure promptly starts an influx of more arterial blood Falgowski found that the relief of intracapsular tension hastened resorption of accumulated inflammatory exudate on account of the resulting arterial hyperemia and restitution of the damaged secreting epithelium with the reestablishment of normal circulatory conditions Petri[12] is of the opinion that decapsulation relieves an existing congestion and furthers the elimination of detached epithelia or other substances obstructing the canaliculi

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[2] Herxheimer G and Hall J W Ueber die Entkapselung der Niere Arch f path Anat. and Physiol. 1905 clxxix, 153

[3] Zaaijer J H Nierendekapsulatie Nederl Tijdschr v Geneesk 1905 2 r xli d 2 1528 Untersuchungen über den funktionellen Wert der sich nach Entkapselung neubildenden Nierenkapsel Mitt a d. Grenzgeb d. Med u Chir, 1904 1905 xiv 311

[4] Thelemann Ueber die Entkapselung der Niere Deutsch med Wchnschr 1904 xxx 538

[5] Fairchild D S Ann Surg 1903 xxxvii 963

[6] Zondek M Die Topographie der Niere und ihre Bedeutung für die Nieren-Chirurgie Berlin 1903 O Hirschwald p 110 abstr in the Rev d Chir June 1911 Die chirurgische Behandlung der chronischen Nephritis nach Edebohls, Mitt a d Grenzgeb d Med u Chir, Gedenkband Mikulicz Jena 1907 235 Die Dekapsulation und die Skarifikation der Niere und ihre klinische Bedeutung Med. Klin 1911 vii 79

[7] Stern Ueber Veränderungen an der Niere nach Entfernung der Tunica propria Verhandl d deutsch Gesellsch f Chir 1904 xxxiii 189 Ueber Veränderungen an der Niere nach Entfernung der Capsula fibrosa (Dekapsulation nach Edebohls), Zentralbl f Chir., 1904 xxxi, 133

[8] Sippel A. Die Nierenenthülsung bei puerperaler Eklampsie Ztschr f gynäk Urol 1910 ii 69

[9] Sippel A Zur Nierenaushülsung oder Nierenspaltung bei Eklampsie Zentralbl f Gynäk 1907 xxxi 1586

[10] Gminder Ueber Nierendekapsulation bei Eklampsie Münchener med Wchnschr., 1908 lv 2073

Gavriloff[13] from animal experiments with decapsulation of the kidneys in eclampsia and other affections of the kidneys concludes

1 Diuresis of the decapsulated kidney is increased.

2 The vesicular circulation in a decapsulated kidney is freer and stronger

3 The diuretic action is better in a decapsulated kidney than in a non decapsulated kidney

Ehrenfest[14] holds that according to our present physiologic knowledge such a disturbance in the circulatory conditions of the capillary system influences the secretory function chiefly only qualitatively and not quantitatively At present, however, the assumed value of decapsulation still rests solely on the belief in its specific diuretic effect Ehrenfest[14] from experiments with dogs concludes that decapsulation of the kidneys in eclampsia does not increase secretion of urine, and that there is no real ground for the belief that decapsulation is of benefit in post-partum anuria This skeptical attitude does not apply to certain cases of nephritic kidney in which Ehrenfest holds that the operation may create conditions favorable for the final restoration of structural lesions which have not progressed so far that they are beyond the possibility of repair

Ernst Runge[15] says that a definite conclusion as to the value of decapsulation in eclampsia cannot now be drawn, that the prognosis is not very favorable In desperate cases the operation may be performed by skilful hands Sippel[8] agrees that if other means fail and attacks and coma continue after delivery decapsulation is indicated Zangemeister[16] says that decapsulation of the kidneys in eclampsia is unwarranted.

A Cordero[17] reports a case of decapsulation of a kidney which was removed a year later for nephralgia The capsule was completely new formed but contained some thin vessels, which proves that a part of the new-formed vessels exist for some time as a result of the decapsulation, certainly not less than a year If the newly formed capsule is very thick in the beginning it decreases later

D Newman,[18] in a paper on "Increased Vascular Tension in the Kidney as a Cause of Renal Pain, Hematuria and Albuminuria," holds that increased vascular tension is due to two causes, the first of which is mechanical, and the second some morbid processes

M Zondek[6] in a paper read before the Berlin Medical Society, Dec 21, 1910 holds that the capsule covering the kidney is rich in elastic tissue and permits swelling of the kidney under varied conditions of the circulation, also that, if the kidney is decapsulated, the new-formed capsule is of firm connective tissue, capable of stretching, and therefore the kidney may be in serious danger in its future functionating Zondek believes that all of the immediate advantages of decapsulation can be gained by incision to the capsule without any of the dangers of decapsulation

I have found reports of ninety-two cases with definite results, given from forty-four different operators Sixty-two of the ninety-two patients recovered, thirty died, giving a mortality of about 33 per cent I have been able to ascertain that about 30 8 per cent of all cases of eclampsia, under any treatment, end fatally I cannot give any fair comparison of statistics for the reason that only in apparently desperate cases was operation performed and we are left almost entirely to individual experiences for conclusions as to the merits of the procedure, it necessarily follows that no one operator will have any considerable number to report

Alsberg[19] reports four cases of eclampsia treated by decapsulation. Three of the patients recovered and one died eight days after operation from pneumonia This latter case was included among the fatal cases, perhaps unfairly Alsberg states that diuresis was increased in every case after decapsulation

Aubert[20] reports a case of puerperal eclampsia and kidney decapsulation after normal pregnancy and delivery On the sixth day of the puerperium the patient was taken with eclampsia without previous symptoms, she had thirteen attacks during twenty hours Decapsulation of both kidneys was done The attacks did not recur and the patient recovered Aubert advises immediate operation before complications occur

Robert Asch[21] reports the case of a patient who recovered after a decapsulation and says

> If the eclampsia is severe, expectant treatment is unwarranted If delivery has not yet taken place we may await the effect of artificial delivery or cesarean section

Baumm,[22] after a successful decapsulation for eclampsia, thinks favorably of the operation and will repeat it on the next opportunity Baumm,[23] another observer by the same name, reports four decapsulations for eclampsia and does not think well of it He says "This operation does not affect the activity of the kidneys and does not cure eclampsia"

Bollenhagen[24] reports a recovery after decapsulation and observes that the decapsulation was warranted on account of the almost complete anuria

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[11] Nicholson H O The Physiologic Basis for Decapsulation of the Kidney in Eclamptic Anuria, Edinburgh Med Jour 1909 New Series ii 456

[12] Petri De la décortication du rein et de le néphrotomie Ann de gynec et d obst May 1907 p 257

[13] Gavriloff N G Mechanism of the Action of Edebohls Operation Decapsulation of the Kidneys in Puerperal Eclampsia and Other Disturbances of the Circulation and Functional Capacity of the Kidneys Vrach Gaz. 1909 xvi 36 71 98

[14] Ehrenfest H Renal Decapsulation in Eclampsia An Experimental Study Surg Gynec and Obst 1911 xiii 206 Renal Decapsulation in Eclampsia An Experimental Study Tr Am Gynec. Soc. 1911 xxxvi 453

[15] Runge, Ernst Nierendekapsulation bei Eklampsie Berl klin Wchnschr 1908 xlv 2068

[16] Zangemeister W Ueber eklamptische Oligurie zugleich eine Kritik der Nieren Dekapsulation bei Eklampsie Ztschr f. gyn k Urol., 1910 ii, 79

[17] Cordero A. Sugli esiti remoti della decapsulazione del rene nell uomo Clin chir Milano 1908 xvi 758

[18] Newman David Vascular Tension in the Kidney a Cause of Hematuria and Albuminuria Lancet London 1896, ii 1758

[19] Alsberg Paul Zur Nierendekapsulation bei Eklampsie Zentralbl f Gynäk 1909 xxxii 934 Zwei Mitteilungen zum Eklampsiethema Zentralbl f. Gynäk 1910 xxxiv 6

[20] Aubert Puerperaler Eklampsie post partum Nierendekapsulation Heilung Gynäkologia Helvetica, 9 Jahrg Herbstausgabe Geneva 1909

[21] Asch Robert Nierendekapsulation bei puerperaler Eklampsie Zentralbl f Gynäk 1908 xxxii 283

[22] Baumm Nierendekapsulation bei Eklampsie Monatschr f. Geburtsh u Gynäk 1908 xxvii 260

[23] Baumm Zur Indikationsstellung der Nierendekapsulation bei Eklampsie Zentralbl f Gynäk 1911 xxxv 752

[24] Bollenhagen Nierenenthülsung wegen Eklampsie Zentralbl f Gynäk., 1910 xxxiv 1530

S Cholmogoroff,[25] after a fatal case, observes

> Another patient was being prepared for decapsulation when the symptoms ceased and the patient recovered without operation, if any operation had been performed with recovery of the patient, the recovery would have been ascribed to the operation

Essen-Moller[26] appears to think it doubtful whether this operation should be recommended in obstetric therapy

R Franz[27] believes that decapsulation for eclampsia is not indicated before delivery is expected, but if coma and attacks continue, the decapsulation must not be delayed

Vincent[28] reporting six cases, five recoveries and one death after decapsulation, says that the mortality without decapsulation of the kidneys in eclampsia is not greater than with it and considers the operation unwarranted

H Croom after reporting a successful case and after citing twenty-six cases with good results, recommends the operation highly

ABSTRACT OF DISCUSSION

DR. A C WOOD Philadelphia Although skeptical as to [illegible] value of this operation at first, I have become convinced that in certain cases it is [illegible] greatest [illegible] In this connection I desire to refer particularly to one case. It was that of a boy aged 1[illegible] with [illegible] nephritis and extreme general edema under the care [illegible] Prof. James Tyson of the University Hospital Philadelphia [illegible] all medical measures had been exhausted without benefit [illegible] Dr. Tyson's [illegible] I decapsulated both kidneys [illegible] of urine in twenty [illegible] during the next twenty [illegible] the quantity increased [illegible] or 12 ounces, and the day after there was another marked increase and so every day the urine increased in quantity until there was almost a [illegible] The [illegible] and the boy rapidly [illegible] when I heard from [illegible] months ago he was [illegible] at the carpenter's trade Dr Tyson informs me that [illegible] free from albumin and [illegible] and is doing a full [illegible] This case was observed [illegible] th great [illegible] persistently prior to operation [illegible] immediately after the [illegible] The case was reported by Dr Tyson in the [illegible] *of the Association of American Physicians* [illegible]

DR. LOUIS E SCHMIDT [illegible] case which was demonstrated before the [illegible] Association in Chicago [illegible] of hematuria that had existed for [illegible] very careful [illegible] operated on one side and [illegible] [illegible] found [illegible] about a year ago [illegible] some [illegible] I shall [illegible] no [illegible] hematuria continued I found a kidney comparatively normal in size, but with a great many marked retractions of the capsule I made a decapsulation in this case, and the result seems almost incredible The hematuria immediately stopped; that is, hardly any microscopic blood could be found on the first day, and practically none after the third or fourth day, and no blood macroscopically at any time since There had been no kidney elements in the urine The patient is still under observation He has a markedly low blood pressure I removed a piece of the kidney large enough for microscopic examination, and it simply showed a chronic interstitial nephritis *It seems strange, however, that there had been no kidney elements present during the course of the bleeding and none since operation*

DR VICTOR VECKI, San Francisco *My experience with the operation is not very encouraging as to curing any kind of a kidney disease, but I consider it indicated when prolongation of life is desirable I remember one case in particular, a woman who had had trouble with her husband and was involved in divorce proceedings There was a matter of a small fortune for a child, and it was really necessary that that woman should live a little longer The day she was taken to the hospital she passed only 4 ounces of urine After the decapsulation the amount of urine began to increase considerably She finally passed 2[illegible] ounces of urine, and kept on doing [illegible] for several months Ultimately, she died, as was expected, about [illegible] and seven days after the operation I [illegible] that [illegible] the operation [illegible] I have performed the operation [illegible]* [illegible]

DR. [illegible]

[illegible]

RECENT ADVANCES IN OUR KNOWLEDGE CONCERNING THE CAUSES OF GLYCOSURIA*

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BALTIMORE

Our views concerning carbohydrate metabolism in health and disease are constantly changing New facts are gradually being added to our knowledge of the subject In attempting to explain the causes of diabetes we have been forced to abandon various theories in succeeding decades The accumulated results of innumerable investigators may make obsolete to-day a theory which seemed to hold good yesterday Profiting by this experience, we must ever bear in mind that we should not be carried away by any new theory that is advanced to explain diabetes, even though it may be based on accurate experimental research

In all cases of diabetes, with the exception of the experimental phlorizin diabetes, it is generally conceded that the appearance of the sugar in the urine is dependent on the existence of a hyperglycemia It has generally been held that the glucose content of the blood normally ranges between 0 1 and 0 2 per cent, although Jacobson, working under Cushing's direction in the Hunterian Laboratory at the Johns Hopkins University, believes that these figures are too high and that the normal content is approximately 0 08 per cent Undoubtedly some regulatory mechanism controls the glucose content of the circulating blood, for in the healthy individual it is found that, even after a meal rich in carbohydrates, the percentage of glucose in the circulating blood remains within very narrow limits The carbohydrates in the food are stored up after a meal in the liver and muscles in the form of glycogen Glycogen is believed to be gradually reconverted again into glucose and given up to the tissues as they need it for the production of heat and energy Whenever the glucose content of the circulating blood rises above the physiologic limit a hyperglycemia results and the excess then passes over into the urine and produces either a transitory glycosuria or a permanent glycosuria, as in true diabetes mellitus.

The explanation of a transitory or a permanent glycosuria therefore rests on the determination of the cause or causes of the hyperglycemia An excess of glucose in the circulating blood may be conceived as occurring in one of two ways 1 It may be due to an overproduction of glucose from the glycogen of the liver 2 It may be due to an inability of the tissues, particularly the muscles, to destroy the glucose, or, in other words, to defective oxidation Each of these theories has been supported by able investigators in the past, but the trend of opinion at the present time is in favor of the overproduction theory

THE RELATIONSHIPS OF THE DUCTLESS GLANDS TO CARBOHYDRATE METABOLISM

Investigations in recent years have shown that the internal secretions of the ductless glands have a marked influence on carbohydrate metabolism in health and disease The internal secretions which have been shown up to the present to possess this relationship are those of the pancreas, adrenals, thyroid, parathyroids and pituitary Strictly speaking, the pancreas is not a ductless gland, but it incorporates within its substance the islands of Langerhans, which are really ductless glands According to our present knowledge, it is in these islands that the internal secretion of the pancreas which so strongly influences carbohydrate metabolism is produced It may be shown later that other ductless glands, such as the thymus, ovary, etc, must be added to the list. The function of influencing carbohydrate metabolism is only one of the numerous activities each of these glands is known to possess

As Cammidge[1] recently said in a most interesting article bearing on this subject, "It is now believed that chemical correlation and chemical control exists between practically every gland and tissue of the body" It has been possible, in some instances, to isolate the specific chemical activator or "hormone" through which one tissue activates another It has been shown by Bayliss and Starling[2] that the hydrochloric acid secreted by the stomach acts on the mucous membrane of the upper part of the intestine and gives rise to a substance to which they have given the name "secretin" The latter, when absorbed into the blood, travels to the pancreas and stimulates it into functional activity and causes a flow of its secretion Other similar examples might be cited

THE INTERRELATIONSHIP OF THE ACTION OF THE DUCTLESS GLANDS

It will be of interest to discuss at this point the noteworthy results of Falta, Eppinger and Rudinger[3] who have devoted special attention to the study of the interrelationship of the action of the internal secretions of the ductless glands They believe that the removal of a gland with an internal secretion works in two ways There is, first, the direct result of the absence of its secretion, and secondly, the indirect effect due to the disturbance of metabolism consequent on its relations to other glands They hold that the ductless glands may be divided into two groups according to the disturbances of the metabolic functions of the body to which alterations in their secretory activities may give rise They divide them into (1) an accelerator group and (2) an inhibitory group To the accelerator group belong the thyroid, the adrenals and the hypophysis, since it has been shown that a study of the reactions of the body to injections of preparations from these organs and observations on the result of experimental interference with their functions suggest that all three increase protein exchange, the adrenals cause mobilization of carbohydrates, and the thyroid causes increased fat destruction To the inhibitory group belong the pancreas and parathyroids, because it has been shown that both retard protein destruction, the pancreas being the more active, further, both restrain the mobilization of carbohydrates, the pancreas again being the more active of the two The pancreas also causes a decrease in fat consumption These investigators have correlated their results and have come to the following conclusions

1 The internal secretions of the thyroid and pancreas mutually retard each other's activities

2 The internal secretions of the pancreas and chromaffin system mutually retard each other's action

3 The internal secretions of the thyroid and chromaffin system mutually increase or accelerate each other's action

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* Read in the Symposium on Genital Pathology and Surgery in the Section on Genito Urinary Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

* Because of lack of space this article is abbreviated in The Journal. The complete article appears in the Transactions of the Section and in the author s reprints.

[1] Cammidge P J Relation of the Ductless Glands to Glycosuria Practitioner London 1912 lxxxviii 237

[2] Bayliss and Starling Proc Roy Soc. 1902 lxix 352

[3] Falta W Eppinger H and Rudinger C Ueber die Wechselwirkungen der Drüsen mit innerer Sekretion, Ztschr f. klin Med. 1908 lxvi, 1

In explanation it may be said that the chromaffin system has reference to those groups of cells which have a particular affinity for the salts of chromic acid These cells are found chiefly in four situations (1) they occur in the adrenals, where the largest collection of such cells occurs, (2) they accompany the nerves of the sympathetic system, (3) they occur in abundance in the retroperitoneum, (4) they are grouped together in the pelvis to form the so-called Zuckerkandl organ For all practical purposes, the word "adrenals" may be substituted for "chromaffin system" in the above classification of the accelerator and inhibitory activities of the internal secretions of the ductless glands

THE RELATIONSHIP OF THE PANCREAS AND ADRENALS TO CARBOHYDRATE METABOLISM

Owing to the intimate relationships that are now believed to exist between the internal secretions of the pancreas and adrenals and carbohydrate metabolism the functions of these two glands will be considered together

Although a relationship between the pancreas and carbohydrate metabolism had been suspected for nearly a century, it remained for von Mering and Minkowski[4] to demonstrate in 1889 that complete removal of the gland in dogs was invariably followed by a fatal diabetes, with practically all the features as observed in severe cases in man They subsequently showed that the diabetes was not dependent on the loss of the external secretion of the glands but rather on the absence of some internal secretion which is poured directly into the blood- or lymph-stream

Lepine believed that this internal secretion was of the nature of a "glycolytic ferment," whose presence in the circulating blood was necessary for the proper combustion of the glucose of the blood

In 1900 Opie found that a certain percentage of cases of chronic interstitial pancreatitis were accompanied by diabetes Histologic examination of the pancreas in all cases in which the gland was sclerosed showed that glycosuria occurred only in those cases in which there was extensive destruction of the islands of Langerhans Later Opie showed that many cases of diabetes with apparently normal-looking glands macroscopically showed on microscopic examination extensive hyaline degeneration of the islands of Langerhans This important observation led to two natural inferences first, that the internal secretion of the pancreas which influenced carbohydrate metabolism was probably produced by the islands of Langerhans, and second, that it might subsequently be shown that many if not all cases of diabetes would probably be found to be due to degenerative changes in the islands of Langerhans Subsequent investigations have shown that there are many cases of diabetes which cannot be explained in this way, for it has been found that in certain cases of diabetes the islands are intact

The publication of Cohnheim's[5] experiments in 1903 seemed to afford a satisfactory explanation as to how the carbohydrates are utilized in the body under normal conditions and by inference gave us an explanation of the cause of diabetes According to his view, in order that carbohydrate metabolism should be properly carried on, it was necessary that some substance in the muscle juice be activated by a hormone contained in the internal secretion of the pancreas If for any reason this pancreatic hormone be lacking the glucose would not be utilized in the muscles and would accumulate in the circulating blood, producing a hyperglycemia and a consequent transitory or permanent glycosuria Although Cohnheim's views were hailed with enthusiasm they have not been universally accepted It is quite possible that there is some interaction between the internal secretion of the pancreas and muscle juice, which results in the production of a substance which favors the combustion of carbohydrates More light, however, needs to be shed on this phase of the subject

Although the influence of the internal secretion of the pancreas on carbohydrate metabolism cannot be questioned, its method of action, as we have already seen, is uncertain There is a growing belief that the internal secretions of the pancreas and adrenals are complementary to one another and that each exerts its influence on carbohydrate metabolism by regulating the formation of glucose from the glycogen of the liver

Zuelzer[11] is responsible for the theory, now possessing many adherents, that the internal secretion of the adrenals influences carbohydrate metabolism by "mobilizing" the carbohydrates of the body, particularly of the liver In other words, unless its action is counteracted, the function of the internal secretion of the adrenals is to set free the carbohydrates of the liver and other tissues, causing a hyperglycemia with consequent glycosuria Zuelzer further showed that an antagonistic action exists between the adrenal secretion and the internal secretion of the pancreas

Zuelzer thinks that the internal secretions of the adrenals and pancreas normally react on each other within the liver in such a way as to maintain the normal sugar production from the glycogen and consequently glycosuria is prevented As Falta, Eppinger and Rudinger[3] have shown, the internal secretions of the pancreas and adrenals mutually retard the action of each other Thus, when Zuelzer used the liver of a depancreatized dog, the output of sugar in the urine was increased because there was no pancreatic secretion to retard the "mobilizing" action of the adrenal secretion on the glycogen of the liver In the second experiment, in which the liver from a dog with adrenal diabetes was used, the further increase in the sugar output was due to the "mobilizing" action of the epinephrin that had been used in inducing the adrenal diabetes He further found that when the function of both the adrenals and pancreas was destroyed glycosuria failed to occur In the depancreatized dog he found that glycosuria did not occur if the adrenal veins were ligated In a large number of pancreatectomies performed by Zuelzer, glycosuria always followed except when the adrenal veins were also tied off He believes that one of the most important functions of epinephrin is its influence on sugar metabolism in the liver

Accepting for the time being this view of carbohydrate metabolism, the hyperglycemia in pancreatic diabetes is believed to be due to the absence of the restraining hormone normally produced by the pancreas The "mobilizing" action of the epinephrin consequently causes an overproduction of sugar in the liver with resultant excess of glucose in the circulating blood followed by the inevitable glycosuria

Undoubtedly the nervous system has a marked influence on carbohydrate metabolism Owing to the intimate relationship that is known to exist between the sympathetic and autonomic nervous systems and the chromaffin system it is easy to conceive how psychic disturbances and disturbances particularly of the autonomic system can stimulate the chromaffin system and cause an overproduction of the internal secretion of the adrenal glands, leading to a "mobilization" and overproduction of glucose in the liver and other storehouses for carbohydrates This would lead to hyperglycemia and glycosuria It was formerly thought that the glycosuria that resulted from Claude Bernard's puncture of the floor of the fourth ventricle was due to direct stimulation of the liver through its nervous connections It has been found, however, that if the left adrenal is cut off from the left sympathetic nerve, no sugar appears in the urine after the medulla has been punctured, and it is now believed that the stimulus is transmitted by the left sympathetic nerve to the left adrenal, whence it is passed to the right adrenal by the connecting nerves As a consequence of the medullary puncture the adrenals secrete more actively and the increased flow of the adrenal secretion in its turn brings about an excessive output of sugar by the liver A number of toxic influences possibly act in the same way, the glycosuria to which they give rise being partly the result of the action they exert on the diabetic center in the medulla, and partly an effect of their stimulating action on the sympathetic nerves, or on the adrenals directly, thus, in any case, causing hyperfunction of the chromaffin system, with consequent overproduction of sugar by the liver

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[4] Von Mering and Minkowski Centralbl f klin Med 1889 p 394

[5] Cohnheim Ztschr f physiol Chem 1903 xxxix, 336

[11] Zuelzer G Dohrn M and Marxer A Neuere Untersuchungen über experimentellen Diabetes Deutsch med Wchnschr 1908,

THE RELATIONSHIP OF THE THYROID AND PARATHYROIDS TO CARBOHYDRATE METABOLISM

Every observer who has had a wide experience with diseases of the thyroid gland has been impressed with the fact that in hyperthyroidism and hypothyroidism there is a marked disturbance in carbohydrate metabolism Kraus, Ludwig, Chvostek and many others have observed that spontaneous glycosuria is not uncommon in exophthalmic goiter Further, it has been shown that the administration of small amounts of carbohydrates in this condition often causes a temporary glycosuria In other words, in overactivity of the gland the tolerance for carbohydrates is reduced

On the other hand, in hypothyroidism, myxedema, the occurrence of spontaneous glycosuria is so rare as to practically never occur

THE RELATIONSHIP OF THE PITUITARY TO CARBOHYDRATE METABOLISM

We are chiefly indebted to Cushing[18] and his associates for the demonstration in the last few years of the fact that the pituitary gland contains in its internal secretion a hormone that has a powerful influence on carbohydrate metabolism It is thought that one of the functions of the pituitary glands is to preside over the regulation of carbohydrate tolerance It will be impossible here to give a description of the gross and histologic anatomy of the pituitary gland, but it may be of interest to enumerate the important functions that have been demonstrated to be possessed by its two lobes

I FUNCTIONS OF THE ANTERIOR LOBE

1 It influences body growth If a hypersecretion (hyperpituitarism) occurs during the years of the individual s growth, gigantism results If the hyperactivity occurs after the individual s full growth has been attained then acromegaly results If a diminished secretion (hypopituitarism) occurs, a form of infantilism results, to which attention was first drawn by Fröhlich This condition is known as Fröhlich's syndrome, or "dystrophia adiposa genitalis" It is characterized by small stature, amenorrhea in women, infantile genitalia in both sexes, hypotrichosis, excessive deposition of fat and increased carbohydrate tolerance

2 Injections of extract of the anterior lobe cause an increase in temperature

3 Extract of the anterior lobe increases thyroid function

II FUNCTIONS OF THE POSTERIOR LOBE

1 Its extract causes an increase in blood pressure

2 It is a powerful diuretic

3 It has a remarkable influence over carbohydrate metabolism

4 Schaefer and Vincent think it also contains a substance which may lower blood pressure

5 Rinon and Delille think that the extract stimulates the function of the adrenals and lessens that of the thyroid

It is most interesting that the hypophysis, which previous to two decades ago was considered without function, has now been shown to possess so many important properties Cushing has shown in dogs that the gland is essential to life, for complete removal of the gland invariably results in death It is believed that it is the anterior lobe that is necessary to life, for its removal alone will produce death Cushing holds that the secretion of the pituitary passes by way of the infundibulum into the cerebrospinal fluid in the third ventricle, for he has shown that death also occurs if the hypophyseal stalk is excised while the gland is left behind

It is the influence which the pituitary secretion of the posterior lobe has on carbohydrate metabolism that concerns us most here It was Cushing and his co-workers who first demonstrated by partial hypophysectomies on dogs that it is the posterior lobe of the pituitary which influences carbohydrate tolerance It has now been definitely shown that hyperpituitarism, clinically represented by gigantism and acromegaly, is nearly always accompanied by a lowering of the individual's tolerance for carbohydrates resulting frequently in either a transitory or permanent glycosuria On the other hand, hypopituitarism, clinically represented by the various types of pituitary infantilism, is practically always accompanied by an enormous increase in the tolerance for carbohydrates, so that the patient can ingest from two to five times the amount of glucose and other sugars that a normal individual can without alimentary glycosuria occurring

It was in 1889 that Marie first pointed out the association of acromegaly with pituitary enlargement, although he had described the disease in 1886 Since 1889 there have been numerous reports of cases in which glycosuria has been found in association with acromegaly Out of 176 cases of the disease reported in the literature up to 1908, Borchardt found that glycosuria occurred in 35 5 per cent of the cases Cushing comments on the discordant results which different observers have found in the study of carbohydrate tolerance in acromegaly Some observers have found an actual glycosuria, others only a diminished tolerance, and still others a decidedly increased tolerance Cushing is of the opinion that these discrepancies are entirely dependent on the stage of the disease in which the case comes under observation He holds that the adenomas or other tumors of the anterior lobe of the pituitary, which cause the characteristic features of acromegaly, also produce hyperplasia and overactivity of the posterior lobe in the early stages (hyperpituitarism), with the result that an excess of the secretion reaches the circulation and a lowered tolerance to carbohydrates ensues In the later stages a hypoplasia with consequent destruction and lack of secretion of the posterior lobe occurs (hypopituitarism), with the result that there is an increased tolerance to carbohydrates

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[18] Cushing Crowe and Howmans Bull Johns Hopkins Hosp 1910 xxii 127 Cushing H Goetsch, E and Jacobson C. Bull Johns Hopkins Hosp 1910 xxii 165

CONCLUSIONS

1 It is unwise, from past experience, to accept as settled any new theory advanced to explain the cause of diabetes mellitus

2 It must now be accepted as positively proved that not only the pancreas but also the adrenals (chromaffin system), thyroid, parathyroids and pituitary have a very important influence on carbohydrate metabolism

3 Although lesions of the pancreas have been found in a considerable percentage of cases of diabetes, it is now clear that morbid changes in that organ will not explain all cases, even when alterations in the islands of Langerhans are also taken into account The essential and primary disturbance may be in one or another of the ductless glands

4 There is undoubtedly a marked correlation of the internal secretions of the ductless glands Thus the internal secretions of the adrenals (chromaffin system) and pancreas mutually retard the action of each other The most recent theory concerning carbohydrate metabolism is that first advanced by Zuelzer and now supported by many physiologists According to this view, one of the important functions of the adrenals is to "mobilize" or set free the carbohydrates in the liver and possibly in other storehouses also Under normal conditions, however, this influence is counteracted or exactly balanced by the hormone contained in the internal secretion of the pancreas, and we have a constant normal flow of sugar from the liver When, however, the chromaffin system is for any reason overstimulated, as it may be through the sympathetic nervous system, there is an overproduction of the "accelerator" hormone of the adrenals, the "retarding" hormone of the internal secretion of the pancreas is more than counterbalanced, the glycogen in the liver is rapidly "mobilized" or set free and a hyperglycemia and glycosuria result. A similar result occurs in the cases of so-called pancreatic diabetes Here the adrenal hormone may be normal in amount, but owing to the pancreatic disturbance the pancreatic hormone is absent or diminished and again the adrenal hormone is enabled to mobilize the glycogen of the liver

5 A somewhat analogous explanation may subsequently be found to explain the glycosurias in pituitary and thyroid diseases

6 The theory that hyperglycemia results from deficient consumption or oxidation of glucose in the tissues has fewer adherents than formerly It may still be shown, however, that Cohnheim's theory is in part correct At present the trend of opinion is in favor of the view that the hyperglycemia and glycosuria are dependent on overproduction of sugar in the liver as expressed under Conclusion 4

23 West Franklin Street

ABSTRACT OF DISCUSSION

Dr Robert T Morris New York In some cases of "gall stones without symptoms" glycosuria is the chief symptom After removal of a gall stone or drainage of a septic gall bladder the glycosuria ceases One of our best known New York surgeons suffered from lumbago for years and was incapacitated for work a large part of the time by a glycosuria, when gall stones were removed the lumbago and glycosuria ceased This relationship between glycosuria and gall stones we have assumed to be due to influence on the islands of Langerhans by the gall stones, the reflex irritation causing a congestion of the pancreas to the point of lessened efficiency Is that the correct view, or is a toxic impression made on the pancreas by an infected gall bladder neighbor?

Dr Emil Goetsch, Baltimore In a paper published together with Drs Cushing and Jacobson in the *Bulletin of Johns Hopkins Hospital*, June, 1911, some facts were pointed out concerning carbohydrate metabolism in hypophysectomized animals, and its relationship to the posterior lobe secretion The manner of hitting on these facts was interesting I was studying the growth of dogs after hypophysectomy, and noticed that in cases of total or "near total" removal of the pituitary body there was produced frequently a transient glycosuria, which appeared almost immediately after the operation and disappeared in two or three days This was inexplicable until we began to test the carbohydrate tolerance of these animals before and after operation It was found that after removal of the hypophysis either "near total" or even of the posterior lobe there was found invariably an almost immediate great reduction in the carbohydrate tolerance to a point often of spontaneous glycosuria, to be followed in the course of about ten days by recovery of the normal tolerance and then a gradual increase during a period of a week or two more until the tolerance reached often to double the normal Cane sugar and glucose were used both by mouth and intravenously in these tests It was found also that we could reduce this overtolerance by injecting intravenously or hypodermically extract of hypophysis A comparable action was found to exist in the thyroid gland indicating a similar influence of these two glands at least on some features of carbohydrate metabolism It is still an open question as to how the pituitary secretion (posterior lobe) exerts this influence We felt that it was possibly due to some influence on the pancreas or liver For example we found that after hypophysectomy the liver cell was filled with fat, there was an apparent transformation of glycogen into fat with storage of the latter Oxidative processes in the body were also low There was frequently subnormal temperature which could be made to rise until a definite febrile response of 3 or 4 degrees could be obtained Then, also, in a number of clinical cases with hypophyseal disease a hyperglycemia was observed These are a few of the facts concerning hypophyseal activity which bear very closely on the problems of glycosuria as brought out by Dr Futcher

Dr. T B Futcher, Baltimore I am not prepared to give an explanation of the manner in which glycosuria is brought about by an attack of gall stone colic. Two possible explanations are conceivable One is that there may be some direct effect on the liver itself, causing it to give up the glycogen in the form of glucose, or it may exert its effect through the sympathetic nervous system, which we know is so intimately associated with the chromophilic system and the adrenals, and there may be at the time a hypersecretion of the adrenals which leads to a mobilization of the carbohydrates in the liver with resultant hyperglycemia Whether that is the explanation or not, I cannot say

It was demonstrated in 1850 that puncture of the fourth ventricle led to a temporary glycosuria Claude Bernard believed that the glycosuria was due to certain impulses sent to the liver More recent work has shown that that explanation is probably not true If one severs the nerves going to the left adrenal, a hyperglycemia does not follow the medullary puncture The latest explanation for the glycosuria that follows certain traumatisms and fractures of the base of the brain is that impulses are sent out by way of the sympathetic system to the left adrenal, and thence to the right adrenal, causing a hypersecretion which mobilizes or sets free the glycogen of the liver producing a hyperglycemia and transitory glycosuria

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Factory Hygiene—Men think as they are trained to think Therefore, an educational campaign should precede hygienic changes in factory conditions and processes Let us make it our business as [illegible] teach the cost of the human mechanism, the [illegible] inanity and [illegible] extravagance of human waste [illegible]

THE SURGICAL TREATMENT OF CHRONIC SEMINAL VESICULITIS BY VASOSTOMY (BELFIELD OPERATION)*

ROBERT H. HERBST, M.D
CHICAGO

In discussing the surgical treatment of chronic seminal vesiculitis it might be well to consider briefly the bacteriology of this condition The bacteria commonly found producing pathologic changes in the seminal vesicles are the gonococcus, staphylococcus, streptococcus, tubercle bacillus and colon bacillus Although the gonococcus is by far the commonest cause of seminal vesiculitis, the ordinary pus-producing organisms, namely, the staphylococcus and the streptococcus, not infrequently produce an inflammation of the vesicles It is in these latter cases that faulty diagnoses are commonly made, especially if they happen to occur in old men, or in those who do not give a history of a recent gonorrhea The tubercle bacillus may invade the seminal vesicles by way of the blood-stream, by direct extension from the upper part of the genital tract or by extension from the urinary tract

The part played by the colon bacillus in vesicle infections is not very well known, although this germ has been demonstrated as the causative agent in producing infection of the epididymis

Three distinct conditions are found in studying the pathology of chronic seminal vesiculitis

1 Cases in which the vesicle condition is complicated by a complete obstruction of the ejaculatory duct, which is attributable either to a stricture or to the duct being blocked by detritus and exudation In this class the vesicle is virtually converted into a retention cyst

2 Cases in which there is a partial occlusion of the duct, due either to stricture or to inflammatory swelling

3 Cases in which the duct is perfectly patent and the inflammatory process is limited to the vesicle

Although there is little to be found in the literature on stricture of the ejaculatory ducts, Dr Belfield found the stricture to be unilateral in two cases and bilateral in one case in the consecutive examination of twenty-five dead-house subjects He has also demonstrated it in the living

The patency of the ejaculatory ducts seems to me to be a most important point in the choice of treatment for seminal vesiculitis The common symptoms of this condition, such as a gleety discharge, pain low down in the pelvis and during ejaculation, are well known, but there are many cases in which these symptoms are not pronounced and in which the patient has symptoms which we are likely to refer to the bladder or the prostate Given for example, a man advanced in years, who complains of frequent and imperative urination, with probably some enlargement of the prostate gland, we not infrequently class him as a prostatic when, in reality, he is suffering more from an inflammatory condition of the seminal vesicles rather than from the prostate gland

Several times in my limited experience it has been my good fortune to have relieved by vasostomy and lavage of the seminal vesicles patients, who were supposed to be suffering from hypertrophy of the prostate, and on whom prostatectomy had been advised In certain cases, too, vasostomy has relieved symptoms ascribed to an enlarged prostate, just as did castration years ago Frequently during the first twenty-four hours after performing a vasostomy, a patient who, before the operation, had been tormented by frequent and imperative urination and the usual so-called colic of the neck of the bladder is completely relieved of his symptoms I think that the explanation of this prompt relief lies in the fact that, by opening the vas, we place the seminal vesicle at physiologic rest This also probably explains why improvement was observed in certain cases of hypertrophy of the prostate when castration had been performed, in other words, those patients who improved after castration were suffering from disease of the vesicles rather than from disease of the prostate

Probably one of the most important points in the treatment of chronic seminal vesiculitis by vasostomy is the proper differentiation of cases It is obvious that not all cases of vesiculitis require surgical interference, also that drainage of the vesicles by making an opening in the vas deferens is not possible in all cases From a therapeutic standpoint, it might be well to make the following classification

Class 1 Cases of chronic seminal vesiculitis in which the ejaculatory ducts are perfectly patent

Class 2 Cases in which there is an atresia or partial occlusion of the ducts

Class 3 Cases in which there is a complete obstruction of the ducts

Class 4 Cases complicated by stricture of the vas deferens high up

The cases in Class 1, namely, those having patent ejaculatory ducts, can easily be selected, owing to the fact that they can be readily emptied by pressure of the examining finger in the rectum Most of these cases will respond to stripping and instillations and do not require any operative interference

The cases in Classes 2 and 3, in which there is either a partial or a complete occlusion of the ducts, are those in which the only hope for cure lies in some operative measure — vasostomy, incision or excision of the affected organ During the last few years I have completely abandoned the method of stripping the vesicles in all cases in which they do not readily empty on pressure in the rectum over the vesicles I believe that failure of the vesicles to empty on pressure in the rectum is usually an indication that there is either a partial or a complete occlusion of the ejaculatory ducts, and that stripping of such a vesicle will force the infected contents into the vas, which is commonly followed by an epididymitis.

Vasostomy is also a valuable measure in the prevention of recurring attacks of acute epididymitis Patients in this condition sometimes feel distress and pain along the inguinal canal and the region of the external ring, even before the epididymis is infected An opening into the vas at this time may succeed in preventing a subsequent infection of the epididymis

In cases of Class 4, in which there is a stricture high up in the vas, it is perfectly clear that one could not hope to obtain either drainage or lavage of the vesicle, because the obstruction is proximal to the opening in the vas These cases, however, are comparatively rare Aschoff, in the examination of one thousand subjects, found unilateral stricture of the vas deferens in seventeen cases and bilateral in six cases.

The simplicity of technic in vasostomy indicates it as the operation of choice when surgical measures are deemed necessary for vesiculitis The technic of vasostomy is too well known to require description There are, however, two points that might be emphasized

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* Read in the Symposium on Genital Pathology and Surgery in the Section on Genito Urinary Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912.

1 The vas should be well fixed against the posterolateral wall of the scrotum before the initial incision is made

2 The vas should be entirely stripped of its sheaths before incising it

These precautions will assist one in finding the lumen of the vas for subsequent injections into the vesicles In cases in which the indications for a vasostomy have been correctly observed, the results are uniformly good The question as to whether the vas deferens is patent after a vasostomy may arise in the minds of some There is very little reason why the tube should not remain patent when we reflect that the incision into the vas is a small longitudinal one I am satisfied that strictures following this operation are rare, as I have had opportunities of examining the semen of five of my patients with bilateral stricture and have found spermatozoa in all of them I do not believe, however, that the question of sterility should enter into consideration, providing that the indications for the operation previously existed Knowing that the vast majority of these cases are postgonorrheal and that they refuse to respond to the old method of stripping the vesicles, and knowing, too, that these subjects are a constant menace to every woman with whom they cohabit, who in many instances is the innocent wife, it is my contention that if the vas was blocked in every man on whom vasostomy was performed the operation would still be indicated

I am satisfied that patients with postgonorrheal vesiculitis are the most common carriers of gonococci to the marriage bed, and I repeat that, if once in a large number of cases we should happen to block the vas of an individual by vasostomy, it would be far better than that he should marry with his seminal vesicles contaminated with gonococci

This report includes 104 operations on eighty-eight patients, thirty-two of my cases being bilateral, eleven were due to the ordinary pyogenic organisms, seventy-seven were of the postgonorrheal type The vas was kept open for from seven to twenty-one days Injections were made daily, in a few instances, twice a day for the first few days after operation The mild silver salts were first used and were followed by the more astringent salts Of the eighty-eight cases, fourteen passed from my control before I could ascertain results Of the eleven cases due to ordinary pus infection, ten are cured, one patient still complains of colic following urination, though he affirms that it is less severe than before the operation

I was able to control sixty-three of the seventy-seven postgonorrheal cases The gonococcus was demonstrated in the gleety discharge, in the expressed secretion from the prostate and vesicles or in the ejaculated specimen of semen In the event that the cases were complicated by a stricture, folliculitis or prostatitis, these conditions were treated before the operation was performed The duration of the postgonorrheal condition varied from three months to eight years

Many of the older cases had gone through several acute exacerbations Forty-one of the sixty-three patients were cured by vasostomy, i e, their symptoms disappeared and I was unable to demonstrate the gonococcus either in the expressed prostatic and seminal secretion or in the ejaculated seminal discharge Of the twenty-two cases that did not clear up after the operation three patients were free from gonococci but still complained of some pain and frequency of urination One of these, however, improved after a thorough course of massage of the prostate Of the nineteen cases in which gonococci were still present after vasostomy and lavage, seven cleared up after massage and instillation into the posterior urethra In twelve cases I was unable to eliminate the gonococcus It is my opinion that in some of these the gonococcus was harbored in some of the inaccessible recesses of the prostate gland

If I may be allowed to eliminate the fourteen cases that passed from my control, in fifty-one of the seventy-four cases the cure may incontestably be attributed to vasostomy which is a percentage of 67 This may not appear at first sight to be a strikingly high proportion, but if the class of cases be taken into consideration I am certain that most of them would heretofore have been designated as cases of incurable postgonorrheal seminal vesiculitis

SUMMARY

1 Symptoms referred to the bladder and prostate are frequently relieved by vasostomy

2 In certain cases vasostomy has relieved symptoms ascribed to an enlarged prostate, just as did castration years ago

3 Vasostomy is especially indicated in cases in which we have to deal with either a partial or a complete occlusion of the ejaculatory ducts

4 This operation gives a fairly high percentage of cures in a class of cases which must either be relegated to the incurable heap or be subjected to a far more dangerous and difficult surgical procedure

I take this opportunity to thank Dr Belfield for my early instruction in this work, and for his ever willing consent to the use of the material in our clinics at Rush Medical College and the Chicago Policlinic.

32 North State Street.

PARANOID TYPE OF INSANITY WITH JACKSONIAN CONVULSIONS SYPHILITIC CEREBRAL PACHYMENINGITIS, THE MICROSCOPIC FINDINGS [*]

N S YAWGER, M D
PHILADELPHIA

F C, a colored man aged 42 years, was arrested Sept 5, 1910 while sleeping in a new school building, but because of his strange statements he was taken to the psychopathic wards of the Philadelphia General Hospital, from there he was transferred to the Insane Hospital, September 9, where he developed jacksonian convulsions and died about three months later The cause of his mental state was not determined clinically

For some time previous to his detention and until he died, certain fixed delusions persisted in the mind of this patient He stated that the new school building in which he was arrested had been fixed up for him by God's orders and that it was to be called God's Angel's Temple He drank at times but he had not been drinking for several months previous to his detention at the hospital About a week after he had stopped drinking, he said he heard God call his name and say "You are free from sin, you shall live and never die, you shall never go hungry and you shall never go naked" Because of his shouting his friends thought he was crazy from drink and he was arrested, shortly afterward he became quiet and he was released After this 'call" from God he stopped work He said God talked to him both day and night and told him secrets, but what these were he would not reveal

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[*] Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

[*] From the Laboratory of Neuro-Pathology of the University of Pennsylvania and the Philadelphia Hospital for the Insane

His mental examination at this time showed no disorientation, he had hallucinations of hearing, believing that he heard God's voice, his delusions were shown by his belief that the schoolhouse had been built for him by God's orders and that he was God's angel. He stated that he did not have enemies, was not possessed of much physical strength and was not wealthy, in fact, he talked sanely about all other matters.

The points of interest in his physical condition were unequal pupils, the left being slightly the larger, slight tremor of the muscles about the mouth, deviation of the tongue slightly to the left, enlargement of the inguinal glands, and several scars over the shins.

While talking to his physician, Jan. 13, 1911, he said "*I am going to have a fit, I had two of these last night,*" he then had a seizure. There was involvement of the left side of the face and left arm without any disturbance of consciousness. The convulsions of the night before were his first seizures. After this he had several isolated convulsions and on April 3, was seized by a series of fits, which involved the whole left side of the body. At one time he had 200 convulsions in sixty hours and these were followed by a left sided exhaustion paralysis. The seizures were for the most part confined to the left side and were clonic in type, but they were never attended by the loss of consciousness. A warning always preceded them and this the patient described as a peculiar sensation in his head. Plantar stimulation at times gave a Babinski response, which was present more frequently on the left side. The ophthalmoscopic examination showed no abnormality, and there were no extra ocular palsies, no persistent headache and no vomiting. The patient was at no time melancholy or violent, and his fixed delusions persisted until he died. The seizures usually appeared in series and were followed by a slight elevation of temperature, the last series occurred four days before his death; for a few days previous to this his *heart action was irregular,* his pulse was over 100 and his temperature was subnormal.

Because of the exalted delusions there was at first some thought of the psychosis being dementia paretica, paranoia also was considered. Later, when convulsions developed, it was suspected that the condition had a syphilitic basis, unfortunately the cerebrospinal fluid was not examined nor was a Wassermann test obtained and so no positive mental diagnosis was made.

AUTOPSY REPORT

The general body findings were heart, chronic interstitial myocarditis, lungs, passive congestion and subacute bronchitis, liver, fatty degeneration, slight perilobular fibrosis and chronic interstitial hepatitis, spleen, chronic interstitial splenitis, kidneys, chronic interstitial and chronic parenchymatous nephritis. These chronic findings were not more than suggestive of syphilis.

Under the calvarium, the dura in the right superior parietal region was adherent to the bone, when separated, the bone was found, roughened and reddish in color. There was no evidence of an old fracture. At this site and even extending somewhat below the right parietal region the dura was adherent to the pia arachnoid, and the superficial part of the cortex was stripped off with the membranes. The area of most extensive pachymeningitis was about 2½ inches in diameter and one third inch thick near the center, becoming thinner gradually toward the periphery. There was very slight thickening of the dura for considerable distance beyond this but the rest of the membrane was of normal thickness and texture. The surface of the lesion was somewhat irregular though not distinctly nodular; its consistency varied, being considerably firmer in some parts than in others. The pia arachnoid was somewhat congested. Beneath the area of most extensive pachymeningitis, the convolutions were somewhat flattened. The base of the brain and the vessels were normal. There was slight excess of cerebrospinal fluid, especially in the lumbar region of the cord. The weight of the brain and part of the membranes which happened to be attached was 1,372 gm. (48.4 oz.) this is but little less than the weight of the normal adult male caucasian brain and about 200 gm. (6.1 oz.) heavier than the average weight of the brain of the colored adult in dementia paretica.

HISTOLOGIC FINDINGS

The dura was thickened to perhaps three times its normal diameter but it was difficult to determine just where the dura stopped and the extra development of fibrous tissue began. Many irregularly rounded holes were seen and these probably had resulted from the hardening of edematous tissue. The development of fibrous tissue was very extensive and many of the fibers were markedly swollen. Throughout, there was a rather free leukocytic infiltration with here and there intense localization. Embryonic cells were abundant and increased vascularization was observed. Some masses of granular detritus were seen here and there, and these were probably disintegrated red blood cells.

The cellular infiltration consisted for the most part of three varieties of cells and these appeared to be lymphocytes, mast cells and plasma cells. The lymphocytes were greatly in preponderance. In some areas there were many large, round or oval, highly granular cells, their diameters ranged from 10 to 18 microns. They *mostly contained relatively large, round* or slightly lobulated nuclei which were usually eccentrically placed. When stained with theonin, these cells took on an intense blue color but under artificial light they assumed a deep purple tint, while the lymphocytes remained blue and the red blood cells showed a greenish tinge. These cells conformed more nearly to the type of the mast cell than any other with which I am familiar. The third variety of cells corresponded to the description usually given of plasma cells, they were much less numerous, usually larger and tended to be more angular than the mast cells and they contained finely granular protoplasm. In most of the sections, particularly those stained with hematoxylin, many endothelial cells were observed, these, perhaps, were due to active proliferation, but at no time were such cells found within the lumen of the vessels, often they appeared to be engaged in the formation *of new blood vessels.*

The pia arachnoid was much thickened and densely adherent to the dura. Within the meshes of the membrane there was a diffuse cellular infiltration, the vessels were increased in number with some perivascular cellular areas.

There was subpial neurogliar proliferation amounting to a dense felting, and this accounted for the superficial layers of the cortex being removed with the membranes. These neurogliar cells were very numerous and of gigantic size with many hair like processes radiating from them. Almost all stains revealed the presence of these bodies, but they were most intensely stained by Mallory's neurogliar stain and Weigert's myelin sheath stain. The cells nearest the pia were so closely interwoven as scarcely to be recognized, but as they extended farther into the cortex, their outlines and processes became clearly visible. In contrast with the commonly seen stellate glia cells, their sectional area was four or five times as great, they were mostly oval and had many exceedingly long processes, they frequently contained two or more nuclei, they were proliferating most rapidly and were seen in all stages of development.

The cortex immediately beneath the involved meninges showed some perivascular cell infiltration, but this probably had extended from the meninges. A most destructive process had gone on in the superficial cortical area. Some of the pyramidal cells were barely recognizable, many were shriveled up, others appeared as a pale blue area in which nothing definite could be observed except the nuclei, the angles of the cells were almost lost and the tigroid bodies in many places had disappeared entirely, sometimes the nuclei were not apparent, frequently they were vesicular, often they were displaced and occasionally they bulged beyond the cell outline.

The most superficial medullated fibers showed some varicosities and attenuation but elsewhere the fibers were normal. The vessels at the base of the brain were normal.

There is no specific character to a syphilitic psychosis, it may partake of the type of dementia, mania, melancholia or paranoia. Of course the same is true of an alcoholic psychosis, and since this patient drank to some extent, it is possible that alcohol played a part in causing his mental condition, but this certainly did not account for his convulsions. As to the pachymeningitis which doubtless was the cause of the convulsions. It has been said that syphilis "never attacks exclusively any small area of the brain or cord, it is never strictly local, but always more or less generalized." There was no history of traumatism in this patient nor was there any evidence of an old injury in the bone over the area involved, still, in a syphilitic subject, the possibility of traumatism causing such a condition is pointed out by Mott[1] who has met such cases following "a blow on the head which has set up an inflammation either in the bone or in the dura mater at a definite spot just as a blow on the shin may cause a periosteal node in a person the subject of syphilis."

In this case a clinical diagnosis had not been made and at necropsy the growth was not sufficiently distinctive to reveal its true nature. Microscopic examination of the meninges and brain showed no distinct abnormality except in the areas described, this ruled out dementia paretica, the excessive weight of the brain was likewise against this condition.

The microscopic findings conformed to those found in syphilitic pachymeningitis.

I am indebted to Dr. J. Allen Jackson of the Philadelphia Hospital for the Insane for the opportunity of studying this brain.

2005 Chestnut Street.

ABSTRACT OF DISCUSSION

DR. E. E. SOUTHARD, Cambridge, Mass.: How would you dianose the case under Kraepelin's classification?

DR. N. S. YAWGER, Philadelphia: I would regard it as a paranoid case in which syphilitic perimeningitis played a part.

GLYCOSURIA AMONG THE INSANE

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This investigation into glycosuria of the insane was prompted by my interest in a case of mental aberration marked by melancholia and manifesting sufficient evidence of diabetes to raise the question of dependency of the psychic symptoms on that disease.

While our knowledge of the pathology of diabetes in the nervous system is incomplete it may be well to cite briefly the findings in a general way in order to note the impossibility of establishing a clear relation between glycosuria and mental disease on the basis of anatomic findings.

In the brain a variety of lesions in diverse locations have been associated with glycosuria. Spontaneous lesions as tumors, abscesses, hemorrhages and inflammatory thickenings, especially of the medulla and cerebellum near the place of Claude Bernard's puncture, but also in other parts of the brain, have been noted as causes of glycosuria. Tuberculosis of the hypophysis and the changes resulting in acromegaly are frequently associated with an excretion of sugar. In diabetes we have evidence of disturbed brain action, but we know so little of the cerebral pathology of diabetes and insanity that we cannot correlate these facts satisfactorily.

In the spinal cord, too, certain histologic pictures are undoubtedly dependent on the diabetic process and other lesions which seem to induce glycosuria. In some cases it is difficult to ascertain which is cause and which effect. Thus in diabetes changes occur in the posterior columns similar to those of tabes and there may be symptoms which raise a question of differential diagnosis, especially since it is known that glycosuria is not infrequent in tabes. Spinal cord tumor has been associated with glycosuria and thought to be its cause.

The peripheral nerves are usually the seat of inflammation during the disease, and the neuritic symptoms are common and numerous. Taylor has reported a tumor of the right vagus nerve accompanied by the presence of sugar in the urine. It has been stated in text-books that the cranial nerves are unaffected by the toxins of diabetes, but Merrill[1] has reported a case of nerve deafness due to this. Reference should be made to the theory of Pavy.[2] He has suggested that there is a cerebral influence on the vasomotor supply to the chylopoietic organs, that the nerve filaments from the sympathetic nervous system are connected with areas on the surface of the brain which function as cerebral vasomotor centers. The view which many are inclined to hold at present, that insanity is a functional disturbance of the brain due to toxemia, could fit in well with this theory to explain the frequent association of glycosuria and insanity.

It is the clinical rather than the pathologic findings which have raised the question of the significance of glycosuria in some forms of insanity. The toxins of diabetes undoubtedly have an action on nervous tissue. The neuritis occurring in diabetes manifests itself in numbness, anesthesia, paresthesia, hyperesthesia, cramps in the muscles, neuralgia, especially sciatica, falling nails, glossy fingers, perforating ulcer and gangrene of the toes. Diabetic paraplegia and "diabetic tabes," the complex of steppage gait, girdle sensation, lightning pains and lost reflexes are due to neuritis and cord changes. The loss of vibratory sensation described by Williamson[3] and fibrillary contractions (Pavy[2]) are neuritic. Anginal symptoms have been attributed to pneumogastric neuritis.

The effect of the diabetic toxemia on the cerebral centers is often observed. Mental disturbance of grave import is well known to accompany many cases of the disease. The usual form of aberration is a mild chronic depression with melancholia. Delusions of persecution, sin and ruin are not uncommon. There may be somnolence, confusion, disorientation, dulness of mind, irritability and restlessness. On the other hand, there are many and diverse disturbances of the cerebral function which are associated with a transient or permanent glycosuria. Numerous instances are recorded of the appearance of sugar in the urine following mental shock due to accident, operation, strain of competitive examination, etc. It is common knowledge that diabetes occurs with unusual frequency in families with a neurotic disposition. The frequent occurrence of glycosuria in the insane has been noted by Dawson,[4] Leeper,[5] Halberstadt and Arimoles[6] and others. Melancholia is the type of insanity in which glycosuria is most often found. It is interesting to speculate on the frequency with which a typical melancholic manifests glycosuria and a typical diabetic suffers profound melancholia.

Anatomic diseases of the central nervous system, as acromegaly and focal lesions in various parts of the brain and cord, have been associated with glycosuria.

REPORT OF CASE

Patient.—Mrs. M., housewife, aged 45, married, mother of four children, the youngest 17 years of age, menstruated regu larly, and no abnormalities were found by physical examination After some family trouble the patient worried unduly and manifested depression She was beset with fears regarding the safety of her son and daughter A stay of two weeks in a private sanatorium restored her to her usual frame of mind After her return she complained that she had been unable to get sufficient water at the retreat and to appease her thirst she had drunk from the bath tub Six months later without evident cause there was a second attack of mental disturbance in an aggravated form She was sleepless, cried and prayed continually, and feared that death was soon to befall her son and daughter She reproached herself for giving so meagerly to the church and the poor and was greatly concerned about the restraint applied to some patients in the violent ward Violence was manifested for a day or so when it was necessary to watch her closely to prevent her from choking or otherwise injuring other patients A delusion was developed in regard to her relationship to another inmate

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[1] Mott: A System of Syphilis iv, 81, Oxford University Press, London, 1910.

[1] Merrill: Boston Med. and Surg. Jour., June 15, 1911.
[2] Pavy: The Lancet, London, 1906, i, 1229, 1400.
[3] Williamson: Lancet, London, 1905, i, 855.
[4] Dawson: Lancet, London, 1910, i, 1002.
[5] Leeper: Jour. Ment. Sc., 1901, ii, 758.
[6] Halberstadt and Arimoles: Abst. Jour. Nerv. and Ment. Dis., 1911, xxxviii, 633.

Examination and Treatment—During this time there was no particular evidence of thirst, but urinary examination disclosed a high percentage of sugar There were no neuritic or infectious manifestations of the disease Constipation was marked and obstinate to treatment When the patient was placed on antidiabetic diet, first soup and then carbohydrate free, sugar ceased to appear in the urine She became less melancholic ceased crying and praying, gave up her delusions and later her fears, so that after a period of three weeks there was no evident mental disturbance The relatives insisted on a return to her home against advice A promise to employ a nurse and adhere to strict diabetic management under the guidance of a physician was not fulfilled In four days she was returned because of depression, sleeplessness and a partial return of delusions After two weeks delusions were again lacking, but she continued to worry and was in a state of melancholy when she eloped assisted by relatives After an absence of about a month she was again returned Her mental condition at that time was practically the same as now though her physical condition is somewhat improved At present she is very depressed, cries a great deal and is possessed of her delusions though she does not manifest them unless questioned Sugar appears in the urine occasionally, but is not constant with the general ward diet None of the urinary examinations disclosed diacetic acid and the ammonia output was not increased.

At present I believe that most psychopathists would pronounce the patient a melancholic When she was first brought to the hospital the large percentage of glycosuria high specific gravity and polyuria were certainly suggestive of diabetes The amelioration under treatment strengthened this belief but the subsequent return of the mental condition without glycosuria, the absence of symptoms of diabetes and polyuria favor the diagnosis of melancholia with associated sugar excretion This experience serves to emphasize the close relationship symptomatically between this form of insanity and diabetic psychosis and illustrates the need of time and repeated urinary examination in the differentiation of the two in certain cases To determine something of the significance of the sugar reaction in the urine of the insane the records of 650 urinalyses made on admission of patients to the Nebraska Hospital for the Insane have been examined A total of 4 28 per cent gave a positive sugar test The table illustrates the division of these cases among the 650 patients according to the type of insanity together with the percentage of cases showing glycosuria in each variety of mental disease In involutional melancholia 22 per cent had glycosuria —a much higher percentage than is found in any other variety Organic dementia comes next with 12 per cent This tends to corroborate previous observations that various lesions of the brain are frequently associated with glycosuria There are more cases of glycosuria among the dementia praecox class than among the manic-depressives in this series

Quite frequently a patient will pass sugar in his urine during the first few days after admission and not again subsequently Twenty-four-hour specimens were not always taken in earlier records The quantity of urine was not increased in four cases of temporary glycosuria which I examined

TABLE COMPARING RELATIVE FREQUENCY OF GLYCOSURIA IN DIFFERENT TYPES OF INSANITY

Type of Insanity	Number of Cases	Per cent of Cases	Number with Sugar	Per cent with Sugar
Dementia praecox	253	38 70+	7	2 66+
Manic-depressive insanity	54	8 20+	0	1 02+
Dementia paralytica	64	9 79+	2	34+
Involutional melancholia	9	1 38+	2	22 00+
Senile dementia	56	8 56	2	36+
Not insane	18	2 75	1	5 00+
Organic dementia	8	1 22+	1	12 00+
Epileptic insanity	25	3 82+	1	4 00+
Unclassified	32	4 89+	1	3 1
Intoxication psychoses	60	9 18+	2	3 2
Paranoid states	28	4 28+		
Defective development	32	4 89+		
Huntington s chorea	1	15+		
Total	650		28	4 28±

The association of permanency of glycosuria with high specific gravity was noted in thirty-two patients A high percentage of cases with glycosuria among these insane had a low specific gravity Those with permanent glycosuria for the most part had a specific gravity above 1 030 Occasionally a transient glycosuric urine had a high specific gravity

An examination of epileptics with reference to glycosuria has not been completed I may mention that of six taken indiscriminately in which daily urine examination was made for twenty days, five showed a sugar reaction one or more times In none of these did it occur persistently

A brief epitome of facts gleaned in this study may be of service The sugar reaction is frequently obtained in the urine of the insane especially of melancholics and those with organic brain lesions The condition is usually a temporary one occurring at more or less frequent intervals or only during the first few days after admission The case reported illustrates the need of repeated tests to exclude the presence of a diabetic process The permanency of the glycosuria, specific gravity, polyuria, thirst, neuritides and ammonia output should be considered in differential diagnosis If the sugar is abundant and present over a considerable period of time antidiabetic management should be instituted The importance of the sugar test must not be underestimated in view of the resemblance symptomatically of the diabetic psychosis and melancholia

The discussion of the cause of the frequent appearance of sugar in the urine of the insane can be but speculation Certain factors of instigation are recognized The mental agitation and distress experienced by many who have insight into their condition explains the occurrence of glycosuria on admission The gluttony especially common among epileptics is responsible in all probability for frequent temporary appearance of sugar

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Having Fun with Yourself—To be able to laugh when the joke is 'on you' is to possess a healthy human quality The man who has this gift will not see himself as playing too large a part in the world's affairs He is likely to save his self esteem many buffets and to go about his work a more contented, if a less exalted, being—*Collier's*

TWO CASES OF ACUTE PRIMARY CHOLECYSTITIS PRESENTING UNUSUAL FEATURES

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The unusual clinical picture of the following two cases of gall-bladder disease prompts me to report them as examples of acute primary cholecystitis

CASE 1 —*History* —The patient, a large heavily built Italian of intemperate habits, aged 47, was suddenly seized at 3 p m, Dec 21, 1911, while attending to business, with excruciatingly severe cramping pain in the upper abdomen He was prostrated with it and was soon bathed in cold perspiration There was no chill or subsequent fever My father attended the patient at his home shortly afterward, where this condition was noted Morphin sulphate, one fourth gram, and atropin sulphate, 1/150 grain, were given hypodermatically At 9 p m the pain was still present in paroxysms and the morphin and atropin were repeated At this time some delirium was noticed At 6 a m the following morning the patient was still thrashing about the bed in pain and more marked delirium The morphin and atropin were again repeated, making three-fourths grain of morphin sulphate that was given in fourteen hours At 11 a m I examined the patient, who was lying on his back in semicoma, from which he could with difficulty be aroused His pupils were small but reacted to light Breathing was stertorous and the breath was not particularly foul Deep reflexes were present and not exaggerated There were no local physical findings The urine showed no change The patient sank rapidly into deep coma and died at 1 p m, twenty two hours from the time of onset

The patient's previous history, obtained from his wife, was to the effect that he had suffered a few attacks of pain in the upper abdomen during the previous seven years There was no history of typhoid The case had been considered one of gall stone colic, until the approaching coma pointed to morphin poisoning, although it was not the clinical picture of such

Necropsy —This revealed an enlarged, tightly engorged, blackish gall bladder, projecting free from the under surface of the liver, without the presence of local peritonitis On firm pressure the contents of the gall bladder could be slowly expressed into the intestine When the gall bladder was opened, a thick black bile escaped, carrying with it six small stones In four places the wall appeared ready to break through, but nowhere had a gross perforation taken place The remainder of the body, except the brain, which was not examined, showed no gross lesions No cultures were taken

CASE 2 —*History* —Mr G, a large muscular man, aged 54, had suffered off and on for about two years with periods of irregular stomach distress attacks of pain, rather frequent vomiting and on several occasions the vomiting of considerable quantities of blood The patient was imbued with that peculiar spirit of Scotch stoicism which prevented him from speaking of his own ailments and in consequence but little information could be obtained from his family or friends He had been a hard, steady drinker for many years He was subject to small attacks of fever and headache, but gave no history of having had typhoid

Examination —Dr A D Walker saw the patient first on Friday, March 2, 1912, at his home in the country He was then in bed with a fever of 101 F and was mildly delirious, but could be aroused easily He was seemingly in some pain There were no local physical findings of gall bladder disease, the abdomen, however, was somewhat diffusely tender to pressure, especially along the line of the colon On Sunday evening the patient became maniacal and it required several men to hold him in bed Dr Walker saw him on Monday morning in a state of collapse, quite unconscious, at times mildly maniacal, and with a little fever From Friday until he became unconscious on Sunday he had not complained of great pain Monday evening I examined him with Dr Walker at St Vincent's Hospital He was unconscious but still restless His pupils were of moderate size and reacted to light The deep reflexes were present but sluggish The skin was pale and bathed in cold perspiration There was no jaundice. I thought, however, that a definite degree of rigidity existed over the gall bladder region

This fact, together with the rapidly progressing toxemia and coma, the previous history of attacks of abdominal pain and the experience gained from my previous case, which resembled this one in many respects, made me urge the possibility of an acute gangrenous cholecystitis and advise immediate exploration of the upper abdomen Dr Walker called in consultation a surgical confrère who could not see a surgical aspect to the case Death occurred early Tuesday morning, accompanied by a diffuse edema of the lungs

Necropsy —This was performed four hours after death and disclosed an enlarged engorged, black gall bladder filled with black moderately thick bile without any stones The bile by considerable pressure could be slowly expressed into the intestine The wall was irregularly mottled with gangrenous areas, but there was no gross perforation and no definite peritonitis about the bladder The peritoneal cavity was quite intact. The stomach mucosa was dull gray, covered with abundant thick mucus and possessed several areas of old and recent blood extravasations The lungs on the cut surface were wet with frothy fluid and had no areas of consolidation in them

Cultures made on plain agar slants from the contents of the gall bladder by Dr Ben Wade remained sterile

In a fairly extended search through the literature no instances of acute gangrenous cholecystitis in which local symptoms were masked by an active delirium and coma were found Mellerio[1] reports four cases of acute infectious cholecystitis without stones from the private clinic of Jordan of Heidelburg, in one of which an active delirium occurred later in its course There were present, however, severe sudden pains in the right upper abdomen, early chills and jaundice

The bacterial cause of the acute inflammation in the absence of stones has been undiscovered in the majority of instances Adolf,[2] at the Frankfort clinic, reports a case in which the colon bacillus was found in the discharge from the gall-bladder The colon bacillus and the *Staphylococcus aureus* were recovered from the contents of the gall-bladder of the fourth patient of Mellerio Riedel[3] found streptococci in the bile from the gall-bladder from one patient Six other patients had sterile bile in the presence of acute gangrene Ross[4] reports five cases of acute gangrene of the gall-bladder without determining a specific infection in any of them Keyenburg[5] reports three cases of his own of acute cholecystitis without stone and five more from the literature in which the infection is not stated to have been determined Schwarz[6] failed to discover the infection in one case

It is quite evident that the clinical picture of both of my cases was dominated by the intense general toxemia arising from the gall-bladder What determined this intoxication or the type of infection producing it remained hidden There was nothing new determined in regard to the pathology of the disease The entire absence of secondary peritonitis, however, was noteworthy

In the first case the presence of an old cholecystitis was evidenced by the few stones found in the bladder Whether these in themselves exerted any influence in the production of the severe pain is problematical because the cystic and common ducts were patent to sufficient pressure and did not contain any stones

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1 Mellerio Alfred Diss. Heidelburg 1909
2 Adolf Cited by Mellerio Footnote 1
3 Riedel Mitt. a. d Grenzgeb d Med u Chir 1905 xix 1
4 Ross James F W Canad Prac and Rev 1907 xxii 720
5 Keyenburg Wilhelm Diss Bonn 1909
6 Schwarz Wilhelm München med Wchnschr 1908 lv, 2766

It seems to me that the acute disease of the gall-bladder in the second patient need not necessarily be looked on as secondary to a preexisting chronic cholecystitis, for the reason that there were no stones present and that the severe hemorrhagic gastritis was quite capable of explaining the patient's ill health during the preceding two years I am quite aware, too, that repeated stomach bleedings do occur because of the probable action of toxins, arising in an infected gall-bladder, on the mucous membrane, but in this instance, a true chronic gastritis existed and also the etiologic factor of chronic alcoholism It may be possible that the influence of the latter factor, namely, chronic alcoholism, in both cases, determined in a measure the susceptibility of the patient to absorb the toxins formed

There is present a certain similarity between this type of case and an acutely fulminating infection in any part of the abdominal cavity The extreme collapse and early delirium is at times seen in appendiceal disease or in acute pancreatitis It would seem from these cases that the oncoming of an early delirium in association with any acute abdominal condition should be picked out as a tangible and important indication for immediate exploration whether localizing signs were present or not, for surely the body which shows itself so susceptible to intoxication will not respond to means of elimination until after the focus of infection is removed.

UNILATERAL OPTIC ATROPHY AND CONTRALATERAL HEMIPLEGIA CONSEQUENT ON OCCLUSION OF THE CEREBRAL VESSELS

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Occlusion of one middle cerebral artery producing hemiplegia on the opposite side of the body is an everyday occurrence, furthermore, optic atrophy as a result of obliteration of the retinal vessels on the same side is well known, but the combination of unilateral optic atrophy and contralateral hemiplegia is seldom encountered and might be very confusing

Cases of this kind have been described by Elschnig,[1] Gowers,[2] Hughlings Jackson,[3] Siegrist,[4] Williamson,[5] Batten and Guthrie,[6] Guthrie and Mayou,[7] Oppenheim,[8] von Monokow[9] and Starr[10] With the exception of a brief reference in Starr's text-book, I have not been able to find any description of this symptom-complex in American literature, therefore it seemed important to record the following cases

The first case was seen in the service of Dr John K Mitchell at the Orthopedic Hospital and Infirmary for Nervous Diseases, and the second at the University Hospital in the service of Dr Charles K Mills To them I wish to express my thanks for permission to make this report.

Case 1 —*History* —M M, a man aged 35, was admitted to the Orthopedic Hospital and Infirmary for Nervous Diseases, in the service of Dr J K Mitchell, Jan 8, 1911 Syphilis and alcohol were denied About six weeks previous to admission the patient had had an acute illness, said to have been influenza During that time, while confined to bed, he suddenly developed a partial loss of consciousness, lasting a few minutes, with weakness of the right side of the body, including the face, arm and leg, there was also dimness of vision in the left eye and aphasia Previous to this attack the vision had been normal

Examination —There was nearly complete motor aphasia, but no evidence of sensory aphasia, marked weakness of the right side of the face, cerebral in type, with spastic paralysis of the right arm and leg The tendon reflexes were increased and there was ankle clonus and Babinski sign Vision of the right eye was normal, but the left eye was totally blind Sensation was impaired for touch throughout the paralyzed side of the body The other cranial nerves were normal The heart was normal in size and regular, the sounds though fairly good were lacking in muscular tone Dr Langdon, who repeatedly made examinations of the eyes, reported that the right eye, except for slight grayness of the disk, was normal This was not the grayness of true atrophy In the left eye the arteries were cut down to mere threads, indeed, the inferior temporal branch appeared like a fibrous cord This, with the macular changes, can readily be caused by occlusion of the central artery The Wassermann reaction was negative

Except for blindness and optic atrophy on the same side as the vascular lesion, this case differs in no way from the most commonplace embolic apoplexy with resulting hemiplegia The character of the onset and course of the apoplectic attack itself, as well as the character of the paralysis, were not unusual, the patient, however, immediately after having recovered from the shock of the initial apoplexy complained of dimness of vision on one side, which rapidly progressed to total blindness At first an explanation was difficult, but an ophthalmoscopic examination revealed optic atrophy, with the characteristic empty, thread-like appearance of the retinal vessels

The cases of Batten and Guthrie,[6] of Jackson[3] and of Gowers,[2] which were studied at necropsy, have proved that an embolic mass can be carried through the internal carotid artery into the middle cerebral vessel, producing apoplexy and hemiplegia, at the same time a portion can be swept into the ophthalmic artery, as it branches from the internal carotid, or it may even be lodged in the central artery of the retina, and thus produce sudden blindness and atrophy

In most instances blindness develops suddenly, though in one of the cases described by Batten and Guthrie optic atrophy was probably not completed for nearly three months after the initial apoplexy, a portion of the occluding mass in the internal carotid vessel may have been subsequently swept into the right ophthalmic artery Singer[11] found, while producing embolic apoplexy experimentally on guinea-pigs, that occlusion of one retinal artery and subsequent optic atrophy almost invariably occurred Undoubtedly there must be some peculiar arrangement of the central vessels in guinea-pigs, explaining the frequency of this occurrence

It is not difficult to understand how optic atrophy and hemiplegia can be produced, if we remember the manner in which the terminal branches of the internal carotid vessels are distributed It divides into the middle cerebral, which supplies the basal ganglia, internal capsule, etc , close to the point where the middle cerebral is given off the ophthalmic is derived, which divides into two main groups, the orbital and ocular groups The second group consists of the muscular, anterior ciliary, long and short ciliary and the central artery of the retina, the latter perhaps the smallest of all and possibly more easily occluded than the other branches

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[1] Elschnig Arch f Augenheilk. 1892 xxiv 65 Case 2.
[2] Gowers Lancet London 1875 ii, 704
[3] Jackson Hughlings Ophth Hosp Rep., London 1864 i 300
[4] Siegrist 27 Versamml Ophthalmologisches Gesellschaft Heidelburg 1898 p 10
[5] Williamson R. T Brit Med. Jour 1898 i 1515
[6] Batten and Guthrie Tr Clin Soc Lond. 1903 xxxvi 52.
[7] Guthrie and Mayou Proc Roy Soc. Med 1907 1908 i 180
[8] Oppenheim Lehrbuch der Nervenkrankheiten 1908 ii 939
[9] Von Monokow Gehirnpathologie Wien, 1897 p 838
[10] Starr Diseases of the Nervous System 1910 p 500
[11] Singer Ztschr f. Heilk., 1897 xviii 105

Naturally, the position of the occlusion in the ophthalmic artery or in one of its branches has an important bearing on the resulting signs Unilaterality of visual disturbances is in itself an important indication of a localized vascular lesion In syphilis bilateral and symmetrical involvement would generally occur, or, at least, if one eye was affected, the other would show some evidence of disease even though relatively insignificant Williamson has described unilateral retinal changes occurring with cerebral hemorrhage, embolism and thrombosis, in thirteen cases In eleven the diagnosis was verified by post-mortem examination, and in two the diagnosis seemed correct clinically In four cases of hemorrhage and one of embolism a large retinal hemorrhage occurred on the same side as the cerebral lesion, while the retina of the other eye was practically normal In one case the retinal vessels were markedly dilated and tortuous on the side of the lesion

Oppenheim,[8] in his *text-book*, speaks of an instance in which there was unilateral optic atrophy with contralateral hemiplegia accompanied by considerable headache and tenderness on the side of the atrophy He believed that it was caused by a tumor, but the necropsy revealed cerebral softening Indeed, tumor might easily be confused, particularly when it is situated in or near the frontal lobe, as in the cases described by Gowers, Horsley and Kennedy

For diagnostic purposes the appearance of optic atrophy when caused by vascular occlusion is more or less significant Herbert Parsons[12] says

> A large mass of evidence has already accumulated to show that of all parts of the ocular circulation the part in the immediate vicinity of the lamina cribrosa is the most liable to be affected by vascular disease in any form *This undoubtedly* is true in regard to obstruction of the central artery whether it be due to embolus, endarteritis or endarteritis combined with thrombosis

Parsons divides the appearance of the various stages of atrophy as follows at first, the arteries are thread-like from more or less sudden cutting off of the bloodstream, later, there is some refilling from the establishment of a collateral circulation, and finally, the arteries are thread-like and sclerosed, associated with optic atrophy

Unilateral optic atrophy may occur as the result of localized endarteritis or a combination of arteritis with thrombosis, without hemiplegia, but apoplexy and hemiplegia can develop subsequently, and then examination will show unilateral optic atrophy with contralateral hemiplegia, nevertheless an accurate history of the time of onset of blindness and a careful ophthalmoscopic examination should make the diagnosis possible This condition is well illustrated by the following case

Case 2 —*History* —P R, a man aged 52, was admitted to the University Hospital, in the service of Dr Mills, Nov 15, 1911 Family history was negative Patient denied syphilitic infection and alcohol During 1909 and 1910 he had complained of dimness of vision on the left side. In February, 1910, he had a series of general convulsions Three days later he suddenly lost consciousness After regaining consciousness he was unable to speak and was paralyzed on the right side of the body

Examination —There was typical right hemiplegia with spasticity, increased tendon reflexes, ankle-clonus and Babinski sign and nearly complete motor aphasia Sensation was not affected On the left side there was complete blindness Ophthalmoscopic examination showed optic atrophy with great diminution in the size of the retinal vessels, which were sclerotic The retinal vessels of the right eye were moderately sclerotic, but vision was not much impaired

1710 Locust Street

CERTAIN PHYSICAL SIGNS IN SCOLIOSIS OF LESSER DEGREE

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By scoliosis we mean a deformity characterized by lateral deviation of the spinal column, associated with a rotation of the bodies of the vertebrae around a vertical axis *In this* position of rotation the bodies face toward the resulting convexity, while the spines of the vertebrae point in the opposite direction, a slight deviation of the spines does not always indicate an equally slight degree of aberration of the vertebral bodies

Further, as a result of the rotation, the transverse processes on the side of the convexity are directed backward, and carry with them, in the dorsal region, the ribs, whose angles become more or less prominent according to the degree of deformity

In scoliosis of slight degree the angulation itself may not be marked, instead, a costal bulging or boss is formed, which becomes more noticeable when compared with the flattened area of the opposite side of the chest Also, on the side of the spinal convexity the scapula is pushed away from the spinal column and the shoulder raised, while on the concave side the shoulder drops and the scapula approaches the vertebral column

Often the deformity is so slight as to be overlooked, particularly when the patient attempts to sit erect, hence, it is of much importance, in beginning the inspection of a patient, to permit him to sit at ease, or, even to slouch, if he will

For our purpose it is necessary to consider the matter of compensation in scoliosis, in moderate cases, even, of scoliosis, a compensatory convexity is produced in the vertebral column In the thoracic bony structure, also, compensation occurs, as follows

Diagonally across the chest from the posterior costal angulation or bulging above mentioned, is found a second, less emphasized angulation or bulging, while a flattened area is observed on the opposite side of the chest anteriorly, i e, on the same side of the chest as the posterior bulging alluded to For example, given a dextroconvex scoliosis in the upper dorsal region the greatest angulation or bulging of the thoracic wall will be to the right of the vertebral convexity, while the compensatory angulation will be found to the left of the sternum just below the clavicle The flattened areas will lie to the left, behind, and to the right in front Again examining the back, we should logically expect to find further increased angulation of the ribs on the side of the lower vertebral convexity (the left side), this is the case, in lesser degree, however, inasmuch as the floating ribs, not being anchored are not so much angulated by the rotation of the vertebrae

In order to detect these sl [illegible] al de [illegible] the patient should sit in a [illegible] and [illegible] he position most comfortable [illegible] ev [illegible] d slouchy it may be The admonition of the physician to sit erect tends to defeat the end aimed at It may be necessary to allow the patient to sit quietly for some time before he relaxes sufficiently to show the deformity

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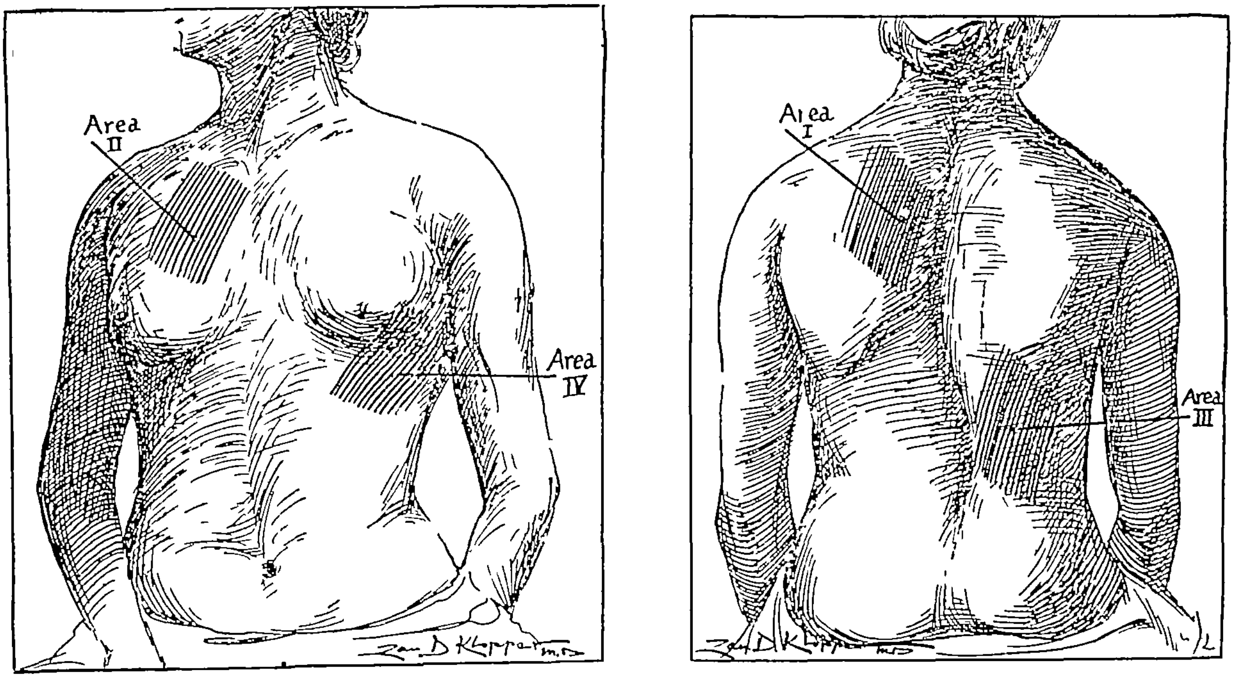
[12] Parsons Herbert The Pathology of the Eye pp 1262 1265

It must be remembered that patients may sometimes confuse percussion findings by muscle play, this point is especially of importance when the deformity is slight and physical signs not pronounced

Note is now made of the relative height of the shoulders, of the position of the scapulae and their distance from the spinal column at their inferior angles, this difference may range from 1 cm to 5 cm The presence of a one-sided supraclavicular fossa should receive consideration, while, in women, the difference in the position of the breasts should attract attention

As the patient continues to relax, the head is often tilted to one side — this in furtherance of compensation As the physician stands behind the patient and looks downward on the latter, the increased prominence of the one side in front is readily seen, unless the deformity be slight.



Areas of high pitched percussion notes in dextroconvex scoliosis

Passing now to percussion we find the distinctive changes in physical signs which especially characterize the scoliotic chest, provided, however, that there is no disease of the lungs which has affected their integrity

Let us percuss first the upper portion of the chest, behind, on the side of the vertebral convexity, we elicit a shorter and higher-pitched note than on the opposite or flattened side that is, on the side of the spinal concavity, where we often find marked resonance

Percussing the lower part of the chest, now, we elicit another high-pitched note over the area on the side of the lower vertebral convexity on the side of the lower vertebral concavity we find another area of resonance

Anteriorly we percuss the area of compensatory angulation and again obtain a short, high-pitched note as compared with the sound elicited from the flattened chest wall on the opposite side A fourth, more or less inconstant, high-pitched area is found diagonally across the front of the chest from the infraclavicular area just mentioned

In intensity the high-pitched areas rank as follows

First, posteriorly, opposite superior vertebral convexity

Second, anteriorly, over the infraclavicular region

Third, posteriorly, below, opposite lower vertebral convexity

Fourth (when present), anteriorly, below, diagonally across from superior infraclavicular area

To exemplify the problem in sound-production here adduced, I have prepared two bars of iron, both of the same length The straight bar we may use to represent the flattened and resonant areas, while the bent bar may be taken for the angulation areas Percussion produces a resonant note in the straight bar and a short, high-pitched tone in the arch

Sahli says

> Increased convexities of the thorax produce dulness which can be best noted in scoliotics and kyphotics This dulness occurs because of the increased rigidity of the more convex rib which vibrates less and allows percussion force to be lost A flattened rib permits of increased vibration under percussion, hence, a somewhat hyperresonant note over the flattened tract

Bachmann (1899), Bouvier, West, Mosse, Kaminer and Zade, as well as other authors, have called attention to the phenomena under discussion, but the subject has been most thoroughly treated and formulated by Neumann.[1]

Given a case of slight scoliosis minus actual lung disease, the high-pitched areas here described are quite constant Where, however, thickening of the pleura has occurred, the percussion note may be found over other areas than those presented in our scheme Differentiation between the signs accompanying empyema or effusion and the schematic signs found in scoliosis should present no difficulties

Early tuberculous consolidation usually presents an area of dulness in front as well as behind on the same side, this is not true of the scoliotic phenomena Further, in advanced tuberculosis, even when, as often, it is accompanied by marked scoliosis, the areas of high pitch are practically never schematically demonstrable The upper areas of high pitch in scoliosis may be, and often are, mistaken for apical tuberculous catarrh, but, in the absence of corroborative physical evidence, front and back, on the same side, such a diagnosis is at least, doubtful — especially in the absence of other data

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[1] Neumann, Wilhelm Beitr z Klin d Tuberk., xviii, No 3

Neumann has called attention to the limited downward excursion of the lung on the side opposite the upper vertebral convexity Not only is the motion usually limited, but also, in some cases, as I have observed, it is entirely eliminated

Diagnostic error in early tuberculosis is often on the side of omission, unless we remember that other conditions may influence variations in pitch, the error may be readily transformed into one of commission Although this error is not fraught with such fatal results as the former, it is capable of producing much distress to those involved

Two cases which have come to me within the last year demonstrate this point One, in a lad of 15, was diagnosed as incipient tuberculosis, and change of climate was advised Examination showed a mitral regurgitation, marked scoliosis, schematic, high-pitched areas, no fever, no tubercle bacilli and no albumin in sputum and no reaction to 5 mg T O The patient has done well since, without treatment He consulted his physician on account of a "cold"

The second patient, a woman, 40 years of age, came with a diagnosis of moderately advanced tuberculosis, she had no fever, absolutely no sputum, a pulse 68 to 72, no lung signs, she had marked scoliosis with easily demonstrable areas of high pitch T O, in doses of 5 and 10 mg respectively, failed to produce reaction, either general or local

I have found these high-pitch areas in many other scoliotics who have presented no other discoverable signs which might be considered as being indicative of tuberculosis — and who are, clinically, well These percussion changes in scoliosis should be borne in mind when tuberculosis is merely suspected but demonstration by classical signs is not possible, they should not be held to be conclusive, nor should their presence militate in any way against a careful search for other pathologic phenomena

2744 Pine Grove Avenue

PLEA FOR EARLY SURGICAL INTERVENTION IN ALL UMBILICAL HERNIAS [*]

J W KENNEDY, M D
PHILADELPHIA

Some time ago I read a paper entitled "Urgent Conditions in Abdominal Surgery," in which I strongly advised closure of all umbilical hernias before any strangulation takes place For the past six months I have been asked so often to operate for strangulated umbilical hernia that I again call attention to this urgent condition

Umbilical hernia is a common condition In many particulars this hernia is unfavorable for a prolonged operation, and therefore I make a plea for more prophylactic surgery The patient is as a rule aged between 45 and 60 years, and is a fleshy person with poor resisting powers The pathology of the umbilical hernia much complicates the condition That typically honeycombed dissection of the viscera between the fascia and the skin, which is so characteristic of umbilical hernia, makes the operation long and tedious In this class of cases the strangulation is often incipient in onset, therefore the patient is profoundly or fatally toxic ere any marked symptoms of strangulation reveal themselves

On account of the gradual onset, extensive involvement of the viscera has taken place before recognition of a serious condition, necessitating major resection or prolonged surgery Rarely do I see a patient before fecal vomiting has taken place, and at this stage it is too late to save many of these patients A partial strangulation of the bowel, which may have taken place for weeks, is the probable cause of the fatal toxemia Absorption of toxins has been taking place from the mucous membrane of the partially obstructed bowel, and the bowel early becomes infected throughout its structure

The surgical difficulties encountered are ominous The strangulated structures have been external so long to the true abdominal cavity and have become hypertrophied to such an extent that it is impossible to return the viscera without unduly increasing abdominal tension and thus profoundly or fatally shocking the patient Again, the viscera have been external so long that when returned to the abdominal cavity they act as a foreign body with a resultant fatality I have seen the mesentery of the small bowel so elongated from its false position that the intestine could be drawn over a foot above the abdominal incision The mesentery to the particular loop of bowel which has been external to the abdominal cavity is often so definitely elongated that I call it "a peninsular of the mesentery" This will require extensive resection of the mesentery and bowel if an attempt is made to close the hernia

If operation is delayed in this class of hernia until operation becomes a necessity, only a small percentage of patients can be saved In these mammoth hernias the mortality is high even when there is slight or no strangulation I am positive that the mortality in abdominal surgery is too high all over the world when compared with our real surgical privileges in this age, and that it is our own professional fault Our mortality in abdominal surgery should not be over 1 per cent

I cannot agree with the physician who, after giving advice for surgical intervention in some particular condition, continues to treat that patient along medical lines with the idea that he has unburdened his conscience by simply advising surgical intervention If he continues to treat the patient along lines which he does not approve, he is an accomplice in a professional crime His attentions should end when his advice is not taken If we all did this, it is easy to see how much earlier we would meet these fatal conditions Indeed, if you have washed your hands and properly tied the vessels with reliable materials and review your list of deaths, the simple phrase "too late" should span the mortality

It is always with the greatest professional apprehension that I think of the untimely death of Joseph Price, that greatest advocate for early surgical intervention The present physiologic era in abdominal surgery will bury many patients without even a chance of surgical privileges I grow bitter under [illegible] It does not make much difference wl [illegible] ne of treatment is in these large, [illegible] The bowel [illegible] be resected, the [illegible] ort circu [illegible] bowel opened and drained without resection and the abdominal cavity drained or closed, yet the mortality is appalling The treatment must practically be prophylactic By this I mean that it must be given not only before there is any strangulation of viscera, but before the hernia becomes of extensive proportions

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[*] From the Clinic of the Joseph Price Hospital.

241 North Eighteenth Street

A REPORT OF SOME NEW CHEMICAL ANALYSES OF URINARY CALCULI

WITH INDICATIONS FOR TREATMENT *

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AND
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We present in this paper quantitative chemical analyses of twenty-five renal calculi and of two cystic calculi, showing that the true renal calculi were composed almost entirely of calcium salts, while the cystic calculi were composed almost entirely of uric acid Our series of calculi were all obtained from patients who lived in this country and our results can be compared with those obtained by several workers in England who obtained results similar to our own

Rowlands[1] in his investigations of twenty-two stones came to the following conclusions that renal calculi were composed almost entirely of calcium oxalate, that uric acid is usually absent and if present it is so only in very small traces, that phosphates are commonly present Mackarell, Moore and Thomas,[2] in a series of twenty-four analyses, corroborated the results of Rowlands

We have analyzed quantitatively sixteen calculi from patients of various hospitals of New York City Table 1 gives a report of the percentage composition of the various components of the stones of this series[3]

TABLE 1—PERCENTAGE COMPOSITION OF SIXTEEN RENAL CALCULI

No	Weight, gm	Moisture Per Cent.	Calcium Oxalate Per Cent	Uric Acid Per Cent	Phosphorus Pentoxid Per Cent
1	12 0446	0 11	37 4	3 50	51 50
2	0 5114	4 1	94 7	2 1	5 3
3	13 982	2 1	29 5	7 46	56 2
4	0 6009	1 08	68 4	7 3	7 8
5	14 998	0 23	94 1	0 2	6 1
6	2 4505	3 2	72 3	23 6	4 3
7	6 175	1 8	90 5	0 01	0 5
8	4 0349	0 04	98 7	1 01	6 4
9	5 7725	0 02	94 2	1 8	4 6
10	2 8004	0 15	81 6	9 3	9 5
11	15 9125	0 4	73 8	7 5	20 1
12	0 9329	0 43	80 4	10 8	6 5
13	0 1612	0 05	91 3	2 46	5 23
14	1 6064	0 099	70 2	12 1	16 9
15	12 8478	0 3	90 37	3 4	6 21
16	9 7621	3 1	91 3	7 2	2 1

The following conclusions may be drawn from these analyses 1 The large majority of renal stones are composed of oxalate of lime 2 Uric acid and the urates are found in all renal concretions, but it is rare to find a renal calculus that is mainly composed of the urates 3 The shape, color consistency, etc, of a stone do not form a criterion of its chemical composition

Recently a series of eleven stones was analyzed by one of us[4] Very nearly corresponding results were obtained Nine of the stones were renal and two of them were cystic The following table records the amounts of the various constituents found

TABLE 2—PERCENTAGE COMPOSITION OF NINE RENAL CALCULI

Received From	No	Moisture Per Cent	Calcium Oxalate, Per Cent	Uric Acid Per Cent	Calcium Phosphate Per Cent
Dr MacCallum New York	17	3 0	68 1	9 11	1 5
Dr MacCallum New York	18	4 1	21 5	6 3	70 8
Dr H Fischer New York	19	2 1	81 1	1 9	11 6
Dr Rosenbloom New York.	20	4 3	43 2	0 6	45 4
Dr Kammerer New York	21	4 0	30 1	0 0	64 2
Dr Rosenbloom Pittsburgh	22	10 3	30 5	0 0	50 6
Dr Rosenbloom Pittsburgh	23	8 2	0 0	0 0	0 0
Dr Sembken New York	24	3 1	90 2	1 8	4 3
Dr Rehling New York	25	5 2	70 8	1 2	20 1

Nitrogenous substances were present in stones 16, 17 and 18, a total nitrogen determination of these stones gave 1 3 per cent, 4 6 per cent and 3 3 per cent respectively Nevertheless, by the method used for the direct uric acid determination, negative results for urates were obtained

TABLE 3—PERCENTAGE COMPOSITION OF TWO CYSTIC CALCULI

Received From	No	Moisture Per Cent	Calcium Oxalate, Per Cent	Uric Acid, Per Cent.	Phosphorus Pentoxid Per Cent
Dr MacCallum	26	7 1	0 0	96 8	0 0
Dr H Fischer	27	6 2	trace	98 0	0 0

We have also examined three gouty tophi and in none of them could we find any uric acid This would tend to show some relation in the metabolic disturbances of gout and renal lithiasis Certain principles for the treatment of both of these conditions will now be considered

SUGGESTIONS FOR THE TREATMENT OF RENAL LITHIASIS

It is quite conventional to recommend alkaline solutions to patients afflicted with stone disease The salts of lithium have enjoyed a great reputation for their supposed wonderful solvent action on renal concretions Whyte and Deften considered alkaline solutions as true solvents for renal calculi Hoffman, Springsfield, Alston, Leger and others recommended alkaline treatment for nephrolithiasis Morgagni suffered from gravel, and his remedy was half a dram of the potassium carbonate during the day "The acid of his urine soon became saturated, the pains in his loins diminished, his urine became less loaded and potash was at length found in that fluid in excess" From Pepys' diary we extract the following procedure for the treatment of stones "And at this season of the year we go to Tunbridge Wells to drink the waters and to get rid of our gravel, to which end we are aided by taking small doses of turpentine" Nowadays it is quite the custom for those who can afford it to go to various bathing and water-drinking resorts, where they ingest alkaline water for the treatment of gout and gravel We believe it quite absurd to imagine that the amount of alkaline metal that is excreted by the kidneys in the urine is of sufficient concentration to cause any but a theoretical solution of the stony concretion

The fact that, as has been shown the majority of renal calculi are composed of insoluble salts of calcium and

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* From the Chemical Laboratories of the Beth Israel and German Hospitals New York City

[1] Rowlands Biochem Jour 1908 iii 346

[2] Mackarell Moore and Thomas Biochem Jour 1911 v 161

[3] These analyses were conducted in the Biological Chemistry Laboratory at the College of Physicians and Surgeons Columbia University New York City by Dr Kahn at the suggestion and under the direction of Dr Rosenbloom

[4] These analyses were carried out by Dr Rosenbloom at the Chemical Laboratory of the German Hospital

not of uric acid or urates, forcibly brings to our attention the necessity of changing our therapeutic ends in regard to the treatment of renal calculi The therapeutic measures for the treatment of insoluble calcium salt concretions are completely different from those employed for uric acid The usual antacid treatment is just the opposite of what is indicated because while uric acid and its acid salts are soluble in alkaline mediums and insoluble in acid, the exact opposite holds for calcium oxalate and calcium phosphate, which are deposited in alkali mediums and dissolved by acids

We therefore conclude that all calculi obtained by operation or otherwise should be subjected to chemical analysis and that if they are found to be composed of calcium salts, no antacid treatment should be advised, as this would lead to a more rapid growth or to increased chance of growth and instead of the non-acid treatment, it would be most advisable to try a course of acid treatment

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COCCIDIOIDAL GRANULOMA

REPORT OF THE NINETEENTH CASE IN CALIFORNIA

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Up to this time eighteen cases of coccidioidal granuloma have been reported and traced to California, the seventeenth and eighteenth being reported by Brown[1] of San Francisco, with review of the literature The first case in California was discovered by Rixford[2] of San Francisco, and later described in conjunction with Gilchrist[3] of the Johns Hopkins Hospital Medical School Afterward Ophuls[4] of San Francisco described the fungus with certain morphology and characteristics, giving the name of *Oidium coccidioides,* with report of thirteen cases, differentiating the fungus from the closely related *Blastomyces coccidioides* of which much has been written, the latest article being by Hektoen[5] of Chicago

The mold appears to be of animal origin, though not proved with occasional infection in man Most infected persons came from the lower half of the San Joaquin valley, and were men employed in railway construction or in caring for animals The duration of the disease, so far reported, is from six months to nine years Most of the patients gave histories of bone lesions, some having accompanying lesions like hypertrophic lupus Others gave histories of tumors of the skin followed by ulceration without tendency to heal Early involvement of the lymph-nodes is frequently seen terminating not unlike tuberculosis

The mode of infection, whether external or internal, has not been determined, but in the forms that produce a skin infection as the first symptom the skin can in all probability be determined as the primary focus In internal cases infection is most frequently seen in the lungs The infection travels by blood- and lymph-streams and in autopsies posted, the internal organs are more or less attacked with lesions and distributions as in tuberculosis In its predilection for organs the two diseases are rather similar-

Most of the previous patients were treated with potassium iodid accompanied with surgery All cases recorded are fatal but one, the first symptom of that being a bone lesion of the ankle The leg was amputated before other lesions developed and the patient is reported alive and well

REPORT OF CASE

The patient was a Japanese, aged 30 years, a farmer by occupation, who had lived in California since coming from Japan in 1909

The previous history was negative except for the diseases of childhood, venereal diseases being denied During the year 1910 he was working in the San Joaquin valley as a teamster in a vineyard January, 1911, he was taken ill, treated for typhoid fever and was in bed for two months During the latter part of this time tenderness developed in the right heel with slight swelling After the fever abated the patient was permitted to be up, the tenderness and swelling remained During the latter part of March, pain and tenderness developed in the left shoulder and later in the left hip Work was resumed, but in a few days he was compelled to stop on account of weakness

In July the patient first came under observation presenting the following symptoms He was fairly well nourished with the appearance of being ill, with pain, tenderness and swelling at the crest of the left ileum near the sacro iliac joint and of the right heel the os calcis and ileum showing bone destruction by the *x* ray There were slight swelling and tenderness over the left scapula and in the right hand over the second and third metacarpal bones Further physical examination proved negative except for a slight tenderness along the colon

Surgery was resorted to, incisions being made along the crest of the ileum and over the os calcis posteriorly, the necrosed bone was curetted and drained. A great deal of pus like material escaped with necrotic bone, which at this time gave no growth on agar, smears showed granular material without leukocytes or bacteria He was in the hospital for six months, during which time similar lesions gradually developed in the left scapula, right metacarpal bones lower end of the left humerus and left tibia These received the same operative treatment with no tendency to close in spite of all after treatment A small nodule developed on the forehead midway between the hair line and the glabella, which grew to be as large as a hazel nut without tenderness or tendency to soften, being firmly attached to the bone but not to the skin There were occasional slight rises of temperature during the later part of the patient's stay at the hospital

Fortunately before leaving the hospital Dr Harry Foster, bacteriologist for the Cutter Laboratories cultured the lesion and found the causative agent to be a mold which was passed *through animals and classified as an oidium* later being identified by Dr William Ophüls of San Francisco as *Oidium coccidioides*

In January, 1912, the patient passed from observation having left for Japan, where he died two months later

The Widal reaction was repeatedly negative and the blood counts showed a slight leukocytosis without increase in the polymorphonuclears No typhoid bacilli could be found by culturing the urine The von Pirquet test proved negative also the Wassermann, but in spite of the latter, salvarsan was given intravenously followed by inunctions of mercury and long continued doses of iodids

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Abuse of Lord Lister—The opponents of all experiments on animals can only see the pain inflicted on dumb creatur[illegible] they seem unable to realize the pain prevented by the experiments They have even been known to abuse Lord Lister although he more than any other man living has been the means of preventing the great[illegible] suffe[illegible] l of checkmating for a time our common [illegible] ch [illegible] e plainly the pain which he delibera[illegible] and ra[illegible] but they seem inc[illegible] h amount of misery wh[illegible]
Clin Jour

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1 Brown Philip King Coccidioidal Granuloma The Journal A M A March 2 1907 p 743

2 Rixford E Read in the Section on Practice of Medicine of the American Medical Association at the Fifty Sixth Annual Session July 1905

3 Rixford and Gilchrist Two Cases of Protozoan (Coccidioidal) Infection of the Skin and Other Organs Johns Hopkins Hosp Reports i

4 Ophüls William Coccidioidal Granuloma The Journal A M A Oct 28 1905 p 1291

5 Hektoen Ludvig Systemic Blastomycosis and Coccidioidal Granuloma The Journal A M A, Sept 28, 1907 p 1071

ACUTE REFLEX DISORDERS CAUSED BY THE CINEMATOGRAPH

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That the moving-picture shows cause, in many spectators, functional diseases similar to those of eye-strain and ocular labor must have been noticed by every general practitioner and oculist of the cities, and yet, so far as I know, none has publicly directed attention to this important fact. I have had so many patients who have been made sick at these places of amusement that I now ask routine questions to elicit this etiologic factor Not one had thought of the connection, so unobservant are patients in such things, so uninstructed have they been left as regards the use of the eyes and sequent nervous and gastric disorders "What were you doing the evening or afternoon previous to your headache or giddiness, or upset stomach?" "O, nothing at all," is the usual answer, "nothing out of the ordinary, I was at the movies for a couple of hours, and went to bed at once, as I was feeling bad ' General physicians, oculists, opticians, gastrologists and neurologists should therefore be on their guard as to this new and unsuspected cause of certain acute functional disorders of which patients may complain

The symptoms do not in my experience, differ essentially or *greatly from those commonly caused by eye-strain* of any kind, or from any variety of abuses of the eyes The most common, of course, are headache, sick headache, migraine—that is, in one or several of its thousand protean forms A few symptoms that are perhaps more frequent and emphasized than others are intense ocular and cerebral weariness, a sort of dazed, "good-for-nothing" feeling, lack of energy, of appetite, etc , to which almost as frequently may be added, "upset stomach," even vomiting, sleepiness and other similar effects of ametropia, bad spectacles, disuse of good ones, etc

If by wearing accurate corrections of ametropia the patient has previously been made aware of their power to banish suffering of many kinds and intensities, he (or she) at once may think, "My glasses need changing " This of course, may be true, but on consulta on with the oculist his discriminating questions as to the cinematograph will bring out that especial cause as the chief one to be avoided

But if "the movies" are not to blame, or not solely to blame, then the good advice will follow that the correcting lenses will possibly *enable the patient to go to* these shows without the appearance of the distinctive symptoms With uncorrected ametropia, the cinem o-graph will more certainly bring about migrainous and nervous symptoms in the patient than when good glasses are worn, because there is no doubt that the cinematograph pictures put a frightful task on even the least defective eyes, whether glassed or not, but the strain is doubled by bad glasses, or by lack of glasses when they are needed

The retinal and cerebral exhaustion and reflexes at the picture shows have or may have, several more or less distinctive factors The expert who has closely observed and analyzed the morbid results in himself will, of course, at once pounce on the chief source of the mischief—the lack of swiftness and accuracy in the sequence and superposition of the individual pictures thrown on the screen or mirror

The *cinematograph has at least four major pathogenic* faults

1 The fixation-point chosen by the eye and attention is, of itself, frequently unstable and tremulous or jerky in movement This is brought to consciousness by observing attentively a fixed object in the picture, as a post, or tree Both eye and mind are confused by this utterly unnatural movement

2 The individual images of the screen-picture are often superposed so slowly that they are separately perceived instead of being fused into a continuum, or flowing unity There results a swiftly passing series of slightly differing pictures on the retina instead of the desired continuity of one into another Eye and brain have never had to endure such a series of disconnected stimuli as this unendurable fluttering

3 There is a ceaseless and exacting conflict between the parts or locations of the individual pictures demanding the attention of the eyes and of sensation which thus dance from one point to another of the ever-moving points of interest

4 The illumination of the scenes is usually wretched

Progress in the mechanical and photographic mechanisms may improve some of these faults and difficulties, but it is doubtful if, singly or collectively they can be entirely avoided The average rate of exposure of the images or films is about sixteen per second, but if the motions of the scene or objects photographed are rapid, as in galloping horses, for instance, the time of exposure of each image must be of much shorter duration In any case the time of exposure should be so short as to avoid the exhausting labor of eye and brain by the visualization of individual images The poor illumination must be improved, and this should be demanded of the companies

In about a dozen years the business of the cinematograph shows has grown from nothing to its present astonishing capitalization and popularity In our country alone there are said to be between 12,000 and 20,000 moving-picture theaters, i e , one to every 8,000 or 5,000 inhabitants, approximately

The total investment in the business is thought to be about fifty million dollars It is seriously proposed to carry on a large proportion of school-teaching and of medical, hygienic and scientific instruction by means of the cinematograph Goods are bought and sold by means of the pictures, and their uses are multiplying in every department of commercial and social life If it is true that about five million spectators are in daily attendance at the picture-show theaters, the consequent eye-strain injuries and sufferings must be enormous, however conservatively estimated, and there is little likelihood of their exaggeration by hygienists and physicians

401 Oriental Avenue

IRRITATION FROM IODIN AND MERCURY ON THE SKIN

S R KARPELES, M D, WASHINGTON, D C

With the present wide use of tincture of iodin for skin sterilization, the following case and deduction may prove of interest and value [1]

Mrs N applied for treatment for an infected right index finger, Oct 3, 1912 The skin covering the finger and over the anterior and posterior surfaces of its metacarpal bone was disinfected with tincture of iodin A three quarter inch inci sion over the distal phalanx evacuated a little pus, a small drain was inserted into the wound and the finger and hand were covered with gauze soaked in 1 1,000 mercuric chlorid solution A gauze bandage covered the finger, hand and wrist

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[1] In this connection see THE JOURNAL Nov 2 1912 Department of Queries and Minor Notes, page 1641.

The patient was directed to pour 1 1 000 mercuric chlorid solution over the entire finger every three hours without disturbing the dressing Because of the severe burning pain the dressing was renewed the following day An intense dermatitis with many blisters, some fully an inch in diameter, covered the whole area of iodin sterilization The relief of this most painful complication consumed about two weeks

If a test tube is filled with 1 1,000 watery solution of mercuric chlorid and 2 or 3 drops of tincture of iodin are added, the chemical reaction becomes apparent, red mercuric iodid being formed The latter according, to Wood, "is a powerful local irritant" In the case cited, the watery solution of mercuric chlorid, which saturated the dressings, reacted with the iodin on the skin, converting it into red mercuric iodid

I caution against the combined use of tincture of iodin on the skin and the saturation of the dressings with the watery solution of mercuric chlorid

1120 Fifth Street, N W

CHANCRE DEVELOPING FOUR DAYS AFTER SALVARSAN INJECTION

Melvin Rosenthal, M D, Baltimore

History—February, 1905, J B came to me suffering with an indurated sore on the penis, which had persisted for nearly three weeks There were a double inguinal adenitis, extensive macular eruption and patches in the mouth and on the tonsils A diagnosis of syphilis was made and the patient given the inunction treatment For three years he religiously followed the treatment which consisted of inunctions at first, followed later by mercurial injections and at varying intervals mercury by the mouth

March, 1910, the patient returned with the history that for two years he had done nothing in the way of treatment for his syphilis He had been absolutely free from any symptoms and enjoyed good health He weighed 190 pounds which was 20 pounds more than he weighed before contracting the disease He consulted me as to the advisability of having a Wassermann test, having read of the infallibility of the reaction His mind was unduly occupied with matters syphilitic and he was well informed on recent advancements in the study of the disease The Wassermann report was negative The combination of events prompted me to assure the patient of freedom from any future complications

December, 1910, the patient insisted on a confirmatory Wassermann since reading that "a positive Wassermann is proof positive of the existence of syphilis but a negative result may be accidental or transient" The second report gave a similar negative result

Examination—November, 1911, the patient, presenting the following symptoms, applied for relief For several months he had had periodic attacks of intense pain radiating down the legs He at first attributed them to exertion but since they came on independently of any exercise he abandoned that theory He had also had irregular abdominal pains at times, followed by nausea and vomiting, but unassociated with the presence of food in the stomach The knee jerk was lost on the right side and diminished on the left A provisional diagnosis of locomotor ataxia was made Jan 5, 1912 Since his last visit the patient has consulted Dr Peterson of New York who confirmed the diagnosis of locomotor ataxia and advised the use of salvarsan

Treatment—January 8, an intravenous injection of 0 6 gm salvarsan was followed by slight discomfort, dizziness and headache for several hours January 12 the patient showed a small erosion on the glans penis, which looked not unlike an abraded surface after a vesicle has ruptured Having on a number of occasions seen herpes follow the administration of salvarsan I concluded that the sore was herpetic, and prescribed accordingly January 18 the sore was distinctly indurated and there was some inguinal adenitis, although spirochetes were not found I am frank to admit that I was not disappointed at the failure to find the organism, being satisfied that the sore was an infected herpetic eruption Local treatment of the sore was stopped and on January 22 the edges of the sore were markedly indurated, the inguinal glands were large and a decided macular eruption appeared on the body An examination of the serum from the sore showed undoubted spirochetes and a Wassermann made on the following day was positive. There has been no change in his tabetic symptoms A week later the patient left the city and I have been unable to get into communication with him since that time

The unusual features of this case are first, the development of a disease, presumably of syphilitic origin, in an individual giving repeated negative Wassermann reactions second, that a man suffering from the direct effects of syphilis should contract a chancre and, third, that a chancre should develop four days after an intravenous injection of salvarsan I feel confident that the possibility of faulty technic or other errors in making of the serum reactions may be eliminated, since they were made by a laboratory worker of undoubted skill and ability

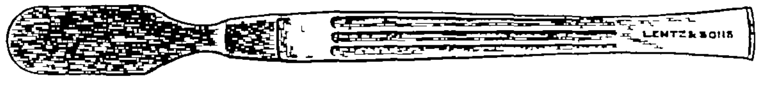
718 North Howard Street

PROSTATECTOMY KNIFE

E H Siter, M D, Philadelphia

Department of Genito-Urinary Surgery University of Pennsylvania

The difficulty in incising the capsule of the prostate with the ordinary sharp pointed knife, and the possibility of hemorrhage from inserting the knife too deeply into the tissue, led me to devise the instrument shown in the illustration



Prostatectomy knife

The object was to have the "belly" or cutting edge of the knife on the end instead of on the side It will be found valuable in dividing the capsule for the suprapubic operation Being flat it is easily guided, and being pointless it reduces to the minimum the danger of puncturing any blood vessel

I find that one incision over each lobe is sufficient to allow me to get the line of cleavage, and I have had no hemorrhage or profuse bleeding since I began its use, I think that the bleeding has been reduced to the oozing which is of minor importance and need cause the operator no uneasiness

2038 Locust Street

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 21 [illegible])

TRICUSPID INSUFFICIENCY

This rarely, if ever, occurs alone, it is generally a sequence of other valvular defects, and represents an overworked, dilated right ventricle It may, however occur from lesions of the lungs which impede the blood flow through them Such are fibroid changes in the lungs, emphysema, prolonged chronic bronchitis the last stages of pulmonary tuberculosis old neglected pleurisies with cirrhosis or fibrosis of the [illegible] and repeated attacks of asthma — an [illegible] valvular defect or pulmonary circ[illegible] that increases the pressure al[illegible] ventricle

The symptoms are tho[illegible] described under other val[illegible] jugular pulsation, especially evident in the external jugular on the left side. The liver enlarges and may pulsate. There are edemas, dropsies, ascites and perhaps hemorrhages. The heart is enlarged and there is a soft systolic blow heard at the lower end of the sternum. The dyspnea is sometimes very great and cyanosis may be present, especially during paroxysms of coughing.

This lesion of the heart is always benefited by digitalis, but the continuance of the improvement and its amount depend, of course, on the cause of the dilatation of the ventricle. Strychnin is often of advantage. These patients should rarely receive vasodilators, and hot baths, overheating, overloading the stomach and vigorous purging should never be allowed. Sometimes improvement will not take place until ascitic or pleuritic fluid, if present, has been removed.

TRICUSPID STENOSIS: TRICUSPID OBSTRUCTION

This is rare and probably always congenital, and is supposed to be due to an inflammation of the endocardium during intra-uterine life. In early childhood it is possible that it may be associated with left-side endocarditis.

A special treatment of the heart, if any is needed, would probably not be indicated unless there was associated tricuspid insufficiency, when digitalis might be used.

PULMONARY INSUFFICIENCY: PULMONARY REGURGITATION

If this rare condition occurs, it is probably congenital. A distinctive murmur of this insufficiency would be diastolic and accentuated in the second intercostal space on the left of the sternum. It should be remembered that aortic murmurs are often more plainly heard at the left of the sternum. Sooner or later, if this lesion is actually present, the right ventricle dilates and cyanosis and dyspnea occur. Digitalis would therefore be indicated.

PULMONARY STENOSIS: PULMONARY OBSTRUCTION

If stenosis is actually present in this location, the lesion is probably congenital. It might occur after a serious acute infectious endocarditis, but then it would be associated with other lesions of the heart. It has been found to be associated with such congenital lesions of the heart as an open foramen ovale or foramen Botalli, or with an imperfect ventricular septum, and perhaps with tricuspid stenosis — in short, a cardiac congenital defect. The right ventricle becomes hypertrophied, if the child lives, to overcome the obstruction.

The physical sign is a systolic blow at the second intercostal space on the left, but as just stated, such a murmur must surely be dissociated from an aortic murmur if found to develop after babyhood, and it should also be diagnosed from the frequently occurring hemic, basic and systolic murmurs; that is, if signs of pulmonary lesions are not heard soon after birth or in early babyhood the diagnosis of pulmonary defects can be made only by exclusion.

Unless the right ventricle is found later to be in trouble, there is no treatment for this condition. If the right ventricle dilates, digitalis may be of benefit.

ACUTE CARDIAC SYMPTOMS: ACUTE HEART ATTACK

It is not proposed here to describe the condition of sudden cardiac failure or acute dilatation during disease, or after a severe heart strain, but to describe the terrible cardiac agony that occurs, sometimes repeatedly, with many patients who have valvular lesions. These patients may not have the symptoms of loss of compensation. Probably some one or more chambers of the heart become overdistended and act irregularly, or the blood is suddenly dammed up in the lungs, with the oppression and dyspnea caused by such passive congestion; or perhaps it is the right ventricle that is suddenly in serious trouble.

A physician receives an emergency call and knows, if it is not a patient who has hysteria, that it is his duty to see the patient immediately. The friends of the patient all anxiously await the physician's arrival, front doors are often wide open, and the servants and the whole household are in a great state of excitement and anxiety. The position in which the patient will be found is that which he has learned gives him the greatest comfort. If the physician knows his patient, he will know how he will find him. He may be sitting up in bed, he may be standing, leaning over a chair, he may be sitting in a chair leaning over a table or leaning over the back of another chair, but he is using every auxiliary muscle he possesses to respire. He is generally bathed in cold perspiration, the extremities are often icy cold, he calls for air, and to stop fanning all in one breath, he wishes the perspiration wiped off his brow, and nearly goes frantic while it is being done; there is agony depicted on his face, his eyes stare, his expirations are often groaning. Sometimes there is even incontinence of urine and feces, often hiccup or short coughs, perhaps vomiting and possibly sharp pangs of pain in the cardiac region. A patient with these symptoms may die at any moment, and the wonder is that so many times one lives through these paroxysms.

The patient can hardly be questioned, can certainly not be carefully examined, and herein lies the advantage of the family physician who knows the patient and his heart and in whom the patient has confidence. In fact, this confidence which such a patient has in the physician who has more or less frequently aided him in weathering these terrible attacks is alone the greatest boon the patient can have.

The immediate conditions to meet are the rapid, fluttering heart, the nervous excitation and cardiac anxiety, and perhaps the most important of all, the vasomotor spasm that is often so pronounced. Physically we have, then, a heart with leaking or constricted valves; in either case more blood is entering the chambers of the heart than can be expelled in one contraction, while the peripheral resistance due to the spasm of the blood-vessels, because of fear, becomes greater every minute and tends still more to interfere with the peripheral circulation and the complete emptying of the heart of its surplus blood. Owing to the well-known stimulus to distention of hollow muscular organs, the heart contracts faster and faster. Soon by some disarrangement of the inhibitory apparatus, the pneumogastric nerves, the heart loses its governor, and the beats increase to even 150 a minute with irregular contractions, the blood being sent through the arteries with irregular force, as evidenced by the varying volume of the pulse. At this time, with or without cardiac pain, which upsets the rhythm of the heart, the patient becomes frightened at the feeling of impending demise, and the cerebral reflexes begin to add to the cardiac difficulty. The breathing becomes nervously rapid besides that which is due to the rapid heart. The chill of fear is added to the already contracted peripheral vessels, and the surface of the body becomes cold, the extremities sometimes intensely so. Next it seems as if the strongly contracted arterioles begin actually to prevent some of the peripheral circulation, the blood is piled up in the large arteries, and the venous circulation becomes more and more sluggish, while the lips, finger-nails and forehead become cyanotic. Respiration becomes more rapid and deep, the inspiration being as strong as possible with every auxiliary muscle taking part, thus making the negative pressure in the chest aid in bringing the blood back through the veins. Part of the extra respiratory stimulus comes from the imperfectly aerated blood reaching the respiratory center.

Two factors may normally, without treatment, stop these paroxysms, and the "bad heart turn" may be cured spontaneously. The first of these is self-control. If the patient does not lose his head, by an effort of the will he saves himself from becoming nervous or frightened and therefore escapes the result of mental excitement, the increased peripheral blood-pressure from fear does not occur, and in a shorter or longer time the heart quiets down. The physician recognizes this power, and gives his patient immediate assurance that he will soon be all right, the patient who knows his physician immediately feels this assurance and is quickly improved.

The second factor in spontaneous cure of the heart attack is relaxation. The exhaustion from the respiratory muscular efforts together with the drowsy condition caused by the cerebral hyperemia and from the imperfectly aerated blood causes finally a dulling of the mental acuity, and the nervous excitement abates, which, with the exhaustion, gives a relaxation of peripheral arterioles, the resistance to the flow of the blood is removed, the surface of the body becomes warm, the heart quiets down by the equalization of the circulation, and the paroxysm is over.

The part the nervous system plays in this paroxysm is shown by the good result obtained from injections of morphin, even when there is no pain, hence the action of morphin is directly in line with the natural resolution of the symptoms; it quiets the nervous system, causes drowsiness, relaxes spasm, and thus causes increased peripheral circulation, many times this is the only treatment necessary.

During these heart attacks it is more than useless to administer any drug by the stomach, as in this condition there will be no absorption, even if there is no vomiting.

While morphin is generally indicated, as just suggested, a very large dose should not be given, lest the activity of the respiratory center is impaired (it is already in trouble), and undoubtedly death may easily be caused by an overaction of morphin during these heart attacks. The addition of atropin to the morphin will prevent depression from the morphin. Also, atropin sometimes quiets cardiac pain, but it will not steady the heart, may irritate it, and will increase vasomotor tension, although peripheral nerve irritation may be diminished. Hence a fair dose of morphin hypodermatically with a small dose of atropin, if respiratory depression is feared, is a physiologic method of bettering the condition.

In this kind of heart attack a drug that often acts well is nitroglycerin. It may be given hypodermatically in a dose of 1/200 to 1/100 of a grain, or a tablet may be dissolved on the tongue, and the dose be repeated once or twice at fifteen-minute intervals, until there is throbbing in the forehead, which shows that a sufficient amount of the drug has been administered. This headache will generally not last long. In the meantime the peripheral blood-vessels are relaxed, the surface of the body becomes warm, the heart quiets, and the attack is over. To hasten the action of nitroglycerin (that is to equalize the circulation) a hot foot-bath is often valuable. Amyl nitrite may be inhaled with the same object in view, but the action is very intense, the prostration often severe, and unless there is angina pectoris, nitroglycerin is much better.

The symptoms of a heart attack may not be quite those above described, they may be those of sudden dilatation or semiparalysis of the heart, in which the prostration is intense and the patient is unable to sit up, although he may be leaning against several pillows. There is dyspnea, but the patient cannot aid respiration with the auxiliary muscles by holding the arms and shoulders tense or obtaining support from the arms, in fact, the arms are almost strengthless. The surface of the body may be warm, and the arms may be warm except the hands, the feet, ankles and legs may be cold. There is generally more or less cyanosis, although the face may be pale. The finger-nails often show venous stasis. In these cases the blood-pressure is subnormal, the pulse may be hardly perceptible, and there is none of the tension of the body from fear. The patient may be fearful but he is completely collapsed. Such an attack may occur suddenly in a heart that is perfectly compensating or it may accompany general edemas and dropsies.

If the emergency is excessively urgent, the lungs filling up with blood, moist râles beginning to occur, and frothy and blood-tinged sputum being coughed up, venesection may be indicated, combined with proper hypodermatic medication it may save life, and does at times. In fact, a patient who shows every sign of fatal cardiac collapse may be saved.

One of the best drugs to administer to such a patient is an aseptic ergot, injected intramuscularly. The drug of all drugs for future action (as it will not act immediately) is digitalis, and perhaps best, in this condition, in the form of digitalin. (See N. N. R., p. 68.) The dose of German digitalin may be from one-tenth to one-fourth grain, or even more. This dose, or a smaller dose may be repeated in three or four hours, if deemed advisable. Whether digitalis shall be given at all, or how large the dose shall be depends on whether the patient has been taking digitalis in large quantities or not. He may already be overpowered with digitalis. In that case it would be contra-indicated.

Strophanthin, especially when given intravenously, has been found to be a quickly acting circulatory stimulant. The dose of strophanthin, Merck, ranges from 1/500 to 1/200 grain. The intravenous dose of strophanthin, Thoms, is about 1/130 grain. It should not be repeated within a day or two, if at all.

Atropin in a dose of 1/150 grain and strychnin in a dose of 1/40 or 1/30 are valuable aids in stimulating the circulation under these conditions. The atropin should not be repeated. The strychnin may be repeated in three, four or five hours, depending on the size of the previous dose.

Of all quickly acting stimulants none is better than camphor in saturated solution in sterile oil as may be obtained in ampules. Alcohol is absolutely contraindicated in the latter condition. In the former kind of heart attack, vasodilatation from a large dose of whisky or brandy may be of value. The dose should be large to cause immediate increased peripheral circulation, dilatation, and even a little stupefaction of the central nervous system, and it may be effectual in a way not dissimilar to the action of morphin.

(To be continued)

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[*For other information see second page following reading matter*]

SATURDAY, DECEMBER 21, 1912

BARIUM POISONING AND LOCO-WEED DISEASE

Some time ago[1] mention was made in these columns of the investigations of Dr A C Crawford, then pharmacologist in the Bureau of Plant Industry, on the nature of loco-weed disease This malady is a source of great loss to the stockmen of many of the grazing states of the West Crawford concluded that, in certain regions at least, the inorganic constituents of the plants, especially barium compounds, are responsible for the symptoms of loco-poisoning He asserted that the main toxic features described in stock on the range can be reproduced in rabbits by feeding extracts of certain loco-plants, and that a close analogy exists between the clinical symptoms and the pathologic findings in barium poisoning and those resulting from these experiments

This announcement aroused a wide-spread interest because of its essential novelty Toxic principles in plants had hitherto usually been looked for in the guise of organic compounds, such as the alkaloids and toxalbumins Now, however, the inorganic components of the vegetable forms were called on to explain deleterious effects, and the example which was found to represent them was an element, barium, which had not commonly been taken into account in such relationships If plants readily take up toxic quantities of such elements from soils which yield them, an unexpected and subtle source of danger confronts us

Dr Carl L Alsberg and Mr O F Black, chemical biologists in the U S Bureau of Plant Industry, have reinvestigated this important question[2] They have arrived at the conclusion that the etiologic factor in the loco-weeds which is responsible for the toxicity of these plants in laboratory experiments is not barium Many kinds of plants from the western states and other regions contain barium in amounts of the same order of magnitude as in loco-plants, yet there is no evidence that such plants injure stock on the range

In dried loco-plants the barium is contained in almost insoluble form One might obviously think of the acidity of the gastric juice as an aid to solution, but even extracts prepared by digesting successively with artificial gastric and pancreatic juices contain but slight traces As for the animal experiments, it was shown that there are usually enough salts of calcium, potassium and metals other than barium in appropriate portions of loco-plant extracts to account for death in the usual toxic dose for rabbits Furthermore, similar extracts of alfalfa, which no one charges with special toxicity, may also cause the death of animals in similar dosage

These negative findings of Alsberg and Black are fortified by the newer observations in the field where the conditions pertaining to range animals are met[3] It is now judged that the symptoms and pathology of barium poisoning differ in a marked degree from those noted in loco-poisoning Typical loco-poisoning, according to Marsh, is not produced by barium feeding alone If barium were the cause of loco-poisoning, sulphates which form insoluble compounds of the element would be a logical antidote It appears, however, that experimental administration of magnesium sulphate (Epsom salts) or sulphuric acid in amounts much greater than those necessary to combine with the barium in the loco eaten had no antidotal effect

These newer observations all argue against the specific toxic action of barium in loco-plants The amounts present — rarely more than traces — are too small to prove fatal, and the metal is present in some insoluble form, probably as sulphate or silicate Loco-weed disease needs renewed investigation

TYPHUS FEVER

It has been about seventy-five years since Gerhard, an American physician, convincingly demonstrated on clinical and pathologic grounds the non-identity of typhus and typhoid fevers Up to three years ago our knowledge of the disease stood almost exactly where it was at the time Gerhard first drew attention to its differences from typhoid In the last three years greater advance has been made in our knowledge of the disease, largely through the work of American investigators, than in the previous three-quarters of a century

Last week we discussed[1] some of the factors that have contributed to the wonderful recent advances that have been made in our knowledge of the cause and means of transmission of communicable diseases Reference was made to the fact that without the use of the monkey as an experimental animal our knowledge of typhus would still probably be where it was in Gerhard's time In July, 1909, Nicolle[2] reported the successful infection of a chimpanzee with typhus by inoculation with blood from a case of the disease in man A few months later Anderson and Goldberger,[3] of the U S Public Health Service, by the successful infection of the rhesus and the capuchin monkeys and by showing that these were thereafter immune to subsequent infection, not only confirmed this report but further showed what Nicolle's work indicated, that the fever so induced in the monkey was typhus Following this pioneer work on the disease of Nicolle and his co-workers, and of Anderson and Goldberger, came reports in rapid succession of similar results from Ricketts and Wilder, Gaviño and Girard, and others

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[1] The Rôle of Barium in Loco Poisoning THE JOURNAL A M A., Feb 8 1908 p 478 Barium a Cause of the Loco-Weed Disease ibid Oct. 17 1908 p 1338

[2] Alsberg C L. and Black O F Laboratory Studies on the Relation of Barium to the Loco-Weed Disease U S Dept Agric., Bureau Plant Ind Bull 246 1912

[3] Marsh C D A Field Study on the Relation of Barium to the Loco-Weed Disease U S Dept. Agric. Bureau Plant Ind., Bull 246 1912.

[1] Factors Contributing to Recent Advances in Our Knowledge of Communicable Diseases editorial THE JOURNAL A M A., Dec. 14 1912 p 2157

[2] Nicolle C Reproduction expérimentale du typhus exanthématique chez le singe Compt rend. Acad d sc. July 12, 1909 p 157

Nicolle, Comte and Conseil[4] were the first to report the successful transmission of the disease by the bites of the body-louse (*Pediculus vestimenti*) Since then this finding has been confirmed by Ricketts and Wilder, and by Goldberger and Anderson, and it may be considered as definitely established that typhus fever is transmissible by the bite of this insect and possibly by the bite of the head-louse The untimely death of Ricketts put an end to his work, but Nicolle and his associates have continued their work on the disease in Africa and have brought out many points of interest Gaviño and Girard, from Mexico, have also reported work of importance, especially in regard to the nature of the virus and the susceptibility of the guinea-pig to the disease

One of the most notable advances in our knowledge of typhus was the demonstration early in the present year by Anderson and Goldberger of the Hygienic Laboratory, that typhus was identical with a disease described by Brill of New York and that, instead of being extinct in the United States as almost universally considered, it has actually been endemic in this country for years[5] Cases have been reported from Brooklyn, Chicago, New York, Philadelphia, and recently at the Southern Medical Association, Paulin reported cases from Atlanta Since the report by Anderson and Goldberger of the identity of Brill's disease and typhus, these workers have continued their work on the disease, and in a recent bulletin[6] of the Hygienic Laboratory have brought together all their work on typhus under one cover The publication is one that will be of the utmost value to students of the disease The last paper[7] in the bulletin is the only one of the articles not previously published, and is chiefly concerned with the question of immunity and the method of transmission

In a study of the susceptibility of the monkey to typhus, the authors found that a large proportion (about 22 4 per cent) of rhesus monkeys possess at least a transient immunity to infection, and that in about 3 5 per cent of their monkeys the resistance amounted to a permanent natural immunity A well-marked typhus reaction confers on the rhesus monkey an immunity that may be present after at least two years It has been found that fever is the only definite clinical index of a typhus reaction in a monkey, but when clearly marked it is ordinarily sufficient to justify a diagnosis of the disease When the fever was slight or its course atypical, in the opinion of the authors it could not be construed as a typhus reaction unless the immunity test proved the animal resistant to infection, but should the immunity test show that resistance has not been conferred, a diagnosis of previous typhus was not permissible The incubation period in about 90 per cent of their monkeys, experimentally infected, varied between six and ten days, and in 103 cases of typhus in the monkey there occurred four deaths Anderson and Goldberger confirm the reports of Nicolle and his co-workers, and of Gaviño and Girard, as to the susceptibility of the guinea-pig to infection with typhus It was found that this animal reacts in essentially the same way to an inoculation of typhus blood as does the monkey and that, as with the monkey, one attack confers immunity to a subsequent infection They found that in a certain proportion of cases rabbits may be infected with typhus by blood inoculation

Typhus-immune serum obtained between the fifth and the fourteenth days of convalescence has protective value when injected simultaneously with the inoculation of virulent material or within forty-eight hours afterward, but immune serum obtained on the thirtieth day of convalescence probably has no appreciable protective influence When immune serum and virus are inoculated simultaneously, immunity to subsequent infection does not result, but when the immune serum is injected forty-eight hours after the virus an immunity, probably active in nature, may take place An attempt to infect a monkey with typhus by means of freshly hatched body-lice, the progeny of presumably infected mothers, was negative In the opinion of Anderson and Goldberger, satisfactory evidence of hereditary transmission of the virus in the louse has not yet been presented Attempts to transmit typhus by means of the bites, or by subcutaneous injection of crushed bedbugs that had previously been allowed to feed on infected monkeys were negative They were also unable to produce typhus in monkeys by the injection of the buccal and pharyngeal secretions from human cases of the disease, and therefore express the opinion that droplet infection plays no part in the transmission of the d ise

While the work of tors has added
so much to our kn he cost
been great Of t me
investigators, cc

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[3] Anderson J F and Goldberger Joseph A Note on the Etiology of 'Tabardillo the Typhus Fever of Mexico Pub Health Rep Dec 24 1909 p 1941 The Infectivity of Tabardillo or Mexican Typhus for Monkeys and Studies on Its Mode of Transmission ibid Feb 18 1910 p 177

[4] Nicolle C Comte C and Conseil E Transmission expérimentale du typhus exanthématique par le pou de corps Compt rend Acad d sc. Sept 9 1900 p 486

[5] See Demonstration of the Identity of So-Called Brill s Disease with Typhus Fever editorial The Journal A M A Feb 10 1912 p 414

[6] Collected Studies on Typhus Hyg. Lab Bull. 86 1912.

[7] Anderson John F and Goldberger Joseph Studies in Immunity and Means of Transmission of Typhus, No. 7 in Hyg. Lab Bull 86 1912

Conneff) died from the disease contracted in Mexico and one (Goldberger) was seriously ill. This is another instance of the devotion of men of science to their calling and their willingness to expose themselves to disease and possibly to death in hope of furthering our knowledge. Each year sees additions to this roll of martyrs to medical science, a roll including Lazear, Myers, Dutton, Ricketts, Conneff, McClintic and others.

A REWARD FOR COLONEL GORGAS

Bills have recently been introduced into the Senate and House of Representatives looking to the reward of Colonel Goethals by authorizing his appointment as an additional major-general, and, in the discretion of the President, providing for his assignment as chief of engineers. This proposition suggests several comments, the first of which is that it makes no provision for the reward of Colonel Gorgas. It is also defective in that its provisions depend in part on a contingency which Congress cannot control, because the selection of the chief of engineers is a constitutional function of the executive.

It is now recognized by all well-informed persons that the sanitation of the Isthmus was as essential to the success of the canal construction as was the surmounting of the engineering difficulties, and, of the two sets of problems involved the sanitary problems were newer and along less well-beaten paths than were the engineering ones. While Colonel Goethals is the administrative head of the commission, he and Colonel Gorgas have at present the same military rank. The applications of engineering science to canal construction have no intrinsic precedence over those of medical science to the new and complex questions of tropical sanitation, it would seem, therefore, that there should be little or no difference in the value of the rewards given the two, and it is appropriate that they be provided for in the same act.

There are some other considerations which might well be kept in view when such legislation is under consideration. This work is a great national enterprise which is apart from the usual activities of Army officers, and in no way connected with Army administration. The reward should be in keeping with the national dignity and the magnitude of the enterprise, and should be outside of the routine of Army promotions, so that other officers of the engineering and medical corps who have borne the burden of the routine but important work, without the incentives of increased pay and public applause may not be called on to give their own ewe lamb of promotion as a contribution to the nation's gift.

Again, the officers of the military service are usually compelled by the requirements of their life to live up to their incomes, and when they die their families are left without decent provision. A major-general's widow receives the munificent pension of $30 a month. It would, therefore, be fitting that there should be added to the military promotion in rank a donation of money, as is the custom of the British government so that the generosity of the nation could be applied by the recipient to the needs of those who are dearest to him.

A major-generalship with a cash donation would appear, therefore, the most convenient form of reward for each of these distinguished men, and the act should also provide that after their retirement the President should be authorized to place them on active duty with full pay and allowances whenever their advice or assistance is required on engineering and sanitary questions.

URBAN AND RURAL TYPHOID FEVER

There seems to be a wide-spread belief that typhoid fever is peculiarly a disease of small communities. The regular autumnal increase in this disease in most cities is even referred by some writers to infection contracted during a vacation "in the country." Whatever the importance of "vacation typhoid"—and there is reason to think it has been overestimated—there can be no doubt that, contrary to popular opinion, in some localities typhoid is more prevalent in urban communities.

The incidence of typhoid fever in city and country communities in several New England states has been recently studied by Sedgwick, Taylor and MacNutt.[1] These authors conclude that as far as the state of Massachusetts is concerned typhoid could not be said to be a rural disease in the eighteen years prior to 1908, but was on the contrary distinctly more prevalent in urban communities. In Connecticut a similar condition existed, but in New Hampshire it appeared that there was no marked difference in this respect between rural and urban groups. Before 1890, as these authors point out, typhoid deaths in both Massachusetts and Connecticut were more prevalent in proportion to the population in the country than in the city districts.

It is not difficult to understand these results. The death-rate from typhoid fever depends more on other factors than on city and country conditions as such. A large city with polluted water-supply may maintain a constantly higher typhoid fever rate than the adjacent country towns and rural districts. On the other hand a city with a good water-supply, a pasteurized milk-supply and a proper system of disposing of excretal refuse will to-day almost certainly have less typhoid fever than the smaller communities in its immediate neighborhood. Probably few places in the United States, large or small, will have so low a death-rate from typhoid for the year 1912 as Chicago and Cleveland.

Improper methods of disposing of excreta in the country, with the attendant danger of fly infection, would seem to favor the spread of typhoid fever in rural districts, but a counterbalancing factor is the contact with a large number of persons which is characteristic of city life and would tend to increase the opportunities for infection in cities through the agency of carriers or convalescents. There is no reason why a uniform difference between city and country should be expected In Austria the typhoid death-rate is lowest in communities with less than five hundred population highest in those with from five hundred to two thousand, and then diminishes progressively until the cities with over twenty thousand population have a death-rate but slightly in excess of the small communities with less than five hundred inhabitants

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[1] Sedgwick, William T., Taylor, George Rodney, and MacNutt, J. Scott: Is Typhoid Fever a Rural Disease? Jour. Infect. Dis., 1912, xi, 141.

In other words, we cannot generalize by asserting that typhoid fever is more prevalent in either the city or the country In some regions the factors that make for infection are more active in the large communities of those regions than the small communities, in others the reverse is true Country or city life itself is in no way determinative of typhoid fever infection, and it is confusing to declare that typhoid is to-day either an urban or a rural disease

ALCOHOL AND RACIAL DEGENERATION

A recent writer on the physiologic rôle of alcohol has well said that most discussions of the subject are frankly partisan and therefore partial An account may be entirely accurate in all its affirmations and yet fail to be just, because of what it leaves unsaid in a matter so full of complex considerations In any event propaganda must be preceded by facts, and these must, in turn, be evaluated in a critical spirit of fairness and with due regard to conflicting possibilities

One of the important and widely discussed phases of the question involves the effect of alcohol on the offspring Records of degenerates, statistics on insanity and other diseases have been gathered in abundance and contributed as evidence in one way or another Statistics are proverbially uncertain unless they are collected with due intelligence and interpreted with reasonable precaution This applies above all to human records, hence it is always gratifying to have observations involving such data substantiated by adequately controlled experiments on lower animals It is with this end in view that Professor Stockard of the Cornell University Medical College, New York, has undertaken an experimental study of racial degeneration in mammals treated with alcohol[1]

Alcohol or any other injurious substance may act as a parental poison to affect the offspring in more than one way Since the quality of the offspring depends on both the perfection of the germ cells from which it arises and the nature of the environment in which the embryo develops, it will be noted that damaging effects may be directed to injure the ovum or spermatozoon before fertilization, or the embryo itself may be affected by being subjected to unusual physical or chemical surroundings In the latter case a substance may so alter the pregnant female as to modify the resulting structure of the developing embryo The possibility of damage arising in this way is emphasized by the fact that a passage of alcohol from the blood of the mother to the tissues of the fetus has been clearly demonstrated The developing embryo or early fetus can show the effects by structural abnormalities of the nervous system, whereas the presence of alcohol in the blood of the later fetus may result in disorders of a mere functional type

In Stockard's experiments alcoholic treatment was given to guinea-pigs by an inhalation method A paternal test was applied by mating alcoholic males with normal females This is obviously the crucial test for an influence on the germ cells, for here a defective offspring must be due to an altered spermatozoon, from which it arose, since the ovum and mother are unimpaired In the maternal test alcoholic females were paired with untreated males As Stockard remarks, here the mother has two chances to injure an offspring, either by producing a defective ovum, or by supplying an unfavorable or diseased environment in which the embryo must develop The greatest chance for impairment lies, of course, in the matings in which both parents are alcoholic

The outcome of these investigations has been convincing in their demonstration that alcohol may readily affect the offspring through either parent Though the animals were never completely intoxicated, they may be described as having been in a state of chronic alcoholism Nine control matings of normal animals in the same group gave nine living litters consisting in all of seventeen vigorous individuals Out of forty-two matings of alcoholized animals only seven young survived and five of these were runts In the paternal tests there were abortions, still-born litters and early deaths, the maternal test resulted much the same, when both parents were alcoholic in most cases the matings resulted in no offspring, very early abortions, or still-born litters The single offspring born living from fourteen matings of alcoholic parents died in convulsions at an early age In general the deaths of these unhealthy young followed symptoms of nervous disorders

Here are data to be reckoned with In pointing to a specific affinity of alcohol for the developing nervous system these newer observations lead in the direction that has been indicated by statistical studies on defective human beings They invest the records of degeneracy in relation to alcoholism with a new significance

SCIENCE AND MEDICINE

In an address[1] delivered at the dedication of the Lane Medical Library of [illegible] ford University the president, Dr David [illegible] reviews some of the changes which med[illegible] ract[illegible] e has [illegible] nced in the past [illegible] ho has wat[illegible] of inf[illegible] were guesswork deserve a broader recognition, especially as they touch on some of the mooted aspects of modern medicine

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[1] Stockard C R An Experimental Study of Racial Degeneration in Mammals Treated with Alcohol Arch Int Med October 1912, p 369

[1] [illegible]

President Jordan has emphasized in a novel way the undeniable dictum that sound medicine must rest on science As he remarks, science is alike to all men who have grasped its data and its conclusions, art will vary with the personality of those who practice it An art which is not based on knowledge becomes a mystery or a trade It is a mystery when practice is based on some theory of therapeutics which goes outside of human experience for its justification, and those who try to heal without knowledge of the actual conditions with which they deal are of necessity impostors

This is a frank statement, indeed, of the fact that technical knowledge is a fundamental requisite which must be insisted on in those who profess to combat the ills of the human body If this requirement is fatal to any school of therapeutics, it is time that that particular form of fraud should be done away with There need be no hesitation about this natural limit of "medical freedom" The basis of so-called schools of theoretical medicine is a prearranged theory of the treatment of disease They deal with symptoms in default of knowledge of the underlying causes, but when the knowledge is attained all healing methods must rest on the actual conditions rather than the surface indications The preference for one mode of therapeutics over another should rest on science, on which all can agree, rather than on the varying theories of symptoms which furnish the excuse for the varying schools of medicine

Dr Jordan maintains that the form of quackery involved in the "patent medicine" arose out of the notion that a specific disease has a specific cure He pays his compliment to the business by saying that the aggregate result of the "patent medicine" is the building up of gigantic systems of robbery, on the one hand, and a corresponding damage to public health on the other The way out of this domination lies in the better training of physicians and the enlightenment of public opinion

No system of philosophy or cult of religion can help us to find out what is the matter with a disordered organism and thus remove the cause from which the symptoms flow The proposal of the "healers" not to deal with the body because it does not exist, and to 'treat a belief in sickness as you would sin, with sudden dismissal' finds a cold reception at the hands of one who realizes that the whole fabric of modern science and modern civilization is based on the conception of the reality of external things "It is undoubtedly true," says Jordan, "that a serene spirit is a valuable agency in the recovery from disease It is likewise true that suggestion has a mighty potency when it is rightly applied It is a legitimate and recognized branch of therapeutics, which may be destined to have a wide application in the future treatment of disorders of the nervous system But it is likewise true that suggestion heals no broken bones, a spirit unperturbed gives no safeguard against poisoned mosquitoes and the power of the will and the imagination is potent chiefly against disorders of the imagination and the will It does not advance science to doubt the things we know to be true in order to give proof to propositions we know to be false We may, therefore, be certain that progressive medicine will still believe in the reality of the human body and the rational veracity of the world of sense"

Dr Jordan is a strong believer in the importance of governmental action in eliminating unnecessary disease and thereby contributing to the sum of human welfare But governments as they are now framed and conducted do not appeal to him as ideally efficient agencies — they are ruled by traditions and prejudices and often inspired by doubtful motives Perhaps he is somewhat too pessimistic in this direction We must agree with him, however, in the contention that public opinion, the most effective factor in government, must be based on knowledge and molded by safe and sane leaders Here lies the opportunity and duty of the modern man of medicine to join in the conduct of the affairs of the community so that the people will have a reliable guidance where governments sometimes fail

Current Comment

FACTS ABOUT HEROIN

Although heroin (diacetyl-morphin) and its hydrochlorid have been in use but a few years, they have already established themselves among the habit-forming drugs and have become sufficiently conspicuous in this respect to awaken the thinking public to the deplorable results for which they may become responsible These facts of themselves are sufficient to promote a scientific interest in the physiologic behavior of heroin and its fate within the organism A comparison is at once suggested between heroin and the closely related alkaloids morphin and codein (methyl morphin) Aside from differences in the pharmacologic effects of these two substances, they apparently pursue a different path in the body When morphin is introduced subcutaneously it is rapidly excreted into the stomach and, finding its way along the gastro-intestinal canal, may leave the organism to a large extent in the feces Methyl morphin (codein), on the other hand, differs specifically in being eliminated almost exclusively through the kidneys A recent study of the behavior of heroin[1] at the Pharmacologic Institute of the University of Berlin indicates that this drug is ordinarily excreted in large measure by the kidneys as is codein, while a smaller fraction may pass out through the bowel precisely as morphin does There is a pronounced difference between morphin and codein in respect to the development of tolerance, in the case of codein the continued administration of the drug may even lead to hypersensitiveness quite in contrast with its companion alkaloid exhibiting the reverse phenomenon Numerous familiar clinical experiences have demonstrated the development of "heroinism" in human subjects, so that all analogy with codein fails in this direction A case has been described in which a daily dose of 2 8 gm was tolerated Experimental studies on animals show that an increased tolerance is speedily developed In dogs, for example, the narcotic effect which may persist for thirty hours or more with an incipient dose of 25 mg of heroin has been seen to disappear in two hours after five injections of the drug The explanation of the increased tolerance for morphin has been much debated One may conceive of a heightened capacity of the organism to destroy such organic compounds as one possibility, and an increased immunity of the body cells, vague though the understanding of this mechanism must be at present, remains as an alternative explanation Faust has defended the first of these views in the case of morphin, but the fact that toxic doses of the alkaloid have been found in "immunized" animals tends to render such a theory untenable In the case of heroin it appears that with growing tolerance for the drug it is destroyed in increasing proportion in the body, for after a time heroin can no longer be detected in either the feces or the urine under conditions of dosage in which it is readily detected earlier in the course of its repeated administration

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[1] Langer H Ueber Heroinausscheidung und Gewöhnung Biochem Ztschr, 1912 xlv 221

THE SUGAR CONTENT OF THE BLOOD

In the study of the abnormalities of sugar-formation and utilization in the body the estimation of the sugar-content of the blood has recently come to take its place in experimental work side by side with the observations on the "overflow" of sugar through the kidneys Indeed, the level of the sugar-supply in the circulation has in some ways become a better index of the mobilization of carbohydrate in the organism than any other determinable factor A rise in the sugar-content of the blood — hyperglycemia — usually betrays itself, as in diabetes, by an elimination of the surplus carbohydrate in the urine Poverty of the blood in sugar, on the other hand, cannot be detected in any such indirect way Blood analysis alone will disclose this condition It has commonly been believed that the circulating sugar, the physiologic importance of which as a form of transport of energy-furnishing material is universally recognized, is to be found solely in the fluid portion of the blood Concordant observations by a number of competent investigators,[1] however, have made it certain that the blood-sugar is present not only in the plasma, but in the corpuscles as well In fact, it now appears that the sugar-content of the corpuscles is as a rule equivalent to that of the circulating fluid in which they are suspended These findings raise the question whether or not the sugar-content of the corpuscles is subject to the variations commonly found in the total blood incident to pathologic or experimental influences which affect the latter — whether or not, for example the corpuscles in diabetic blood also become richer in sugar The correct answer to this query should throw light on the interchange of sugar between corpuscles and plasma Does the sugar enter into the formed elements of the blood by a simple physical process of diffusion? If so, there should be a parallelism in the sugar content of the two factors It is conceivable, nevertheless, that the corpuscles exercise a chemical influence on their contents so that the sugar of these cellular masses is regulated as to quantity and disposition quite independently of the soluble carbohydrate in the environmental medium Recent experiments by Professor Hober[2] in Kiel have shown the latter to be the case In varied types of glycemia the sugar has not been found to be comparably distributed between plasma and corpuscles The most likely explanation for the present is that the blood-cells exercise a regulatory influence on the sugar within them, determining the entrance or exit of the carbohydrate in response to local factors which still await elucidation

EPINEPHRIN FROM THE WHALE

America is a land of large ventures We have become used to hearing of enterprises conducted on a magnificent scale and the ideas which are suggested in an industrial way by the word "enormous" are at times found creeping into the modest domain of science Now we are hearing of investigations of the ductless glands carried out on whales[1] — animals truly affording superb advantages in point of size Their adrenal glands, for example, each weigh considerably more than a pound, thus being about five hundred times larger than those from sheep and fifty times larger than the glands from cattle Structurally the adrenals of the whale resemble those of other mammals, as might be expected The yield of epinephrin is proportional to that hitherto obtained from other animals, so that as much as 1 2 gm of the typical active principle has been isolated from a single whale adrenal gland This is, indeed, an American record

THE CHRISTMAS RED CROSS FILM

Three years ago the Edison Company prepared a special film of a story designed to interest and educate the public in tuberculosis This film was prepared with the cooperation and advice of the National Association for the Study and Prevention of Tuberculosis It was released for use in the moving picture theaters of the country a short time before the Christmas season Many of those interested in the tuberculosis campaign doubted the effectiveness of such a method of publicity, while many persons interested in the moving picture business were skeptical as to whether their patrons would take an interest in a film with so apparent an educational and philanthropic object Much to the satisfaction of all concerned, however, the film proved exceedingly popular, and was greatly in demand Each year since, the Edison Company has prepared a film showing some phase of the tuberculosis campaign in a way to arouse both interest and enthusiasm for the work of the prevention of tuberculosis This year the Red Cross story is entitled "Hope" It tells of a man who does not believe that tuberculosis exists in his county, and who therefore refuses to help in the campaign for its suppression The girl to whom he is betrothed contracts the disease and goes to a New York hospital for treatment because there is no provision in her own town for proper treatment. This arouses the hitherto indifferent business man to the gravity of the situation, with the result that the town builds and equips a tuberculosis sanatorium The lesson of the moving picture film is important, the stimulation of the public to interest and increased knowledge in the disease is much more so

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[1] Compare Lepine and Boulud Compt rend Acad d sc 1905 p 140 Rona P and Michaelis L Biochem Ztschr., 1909 xvi 60 Hollinger ibid 1909 xvii 1 Frank E Ztschr f physiol Chem 1910 lxx 120 Other investigators also have published the results of comparable observations

[2] Höber R Ueber die Vertheilung des Blutzuckers auf Körperchen und Plasma Biochem Ztschr 1912 xlv 207

[1] Weidlein E R Epinephrin from the Whale Jour Indust and Engineer Chem., 1912 iv 636

THE CAMMIDGE REACTION IN THE URINE

Recently we took occasion to question the value of the Cammidge reaction, which has enjoyed considerable vogue as a functional test for disease of the pancreas The assumed usefulness of this procedure appears to have become so firmly implanted in the minds of many clinicians, especially the surgeons who are less inclined to exercise a severe critique in matters of chemical import, that a further warning may not be amiss It will be recalled that the reaction is due to the presence in the urine of some unknown substance which yields, on hydrolysis by acid, a compound furnishing a characteristic osazone with phenylhydrazin It was first described in 1904 and has already been the subject of a voluminous literature [1] In confirmation of what we have earlier stated Dr Mayesima of the surgical clinic at the Imperial Japanese University in Kyoto has noted that several substances, such as pentose compounds and glycuronic acid, may be responsible for a positive reaction, the latter being especially concerned in the usual success of the test There is no uniformity in the character of the crystalline osazones obtained Therefore the Cammidge reaction is devoid of diagnostic significance for pancreatic disease It is unfortunate that so promising a reaction must be discarded, but in this respect the test has merely suffered the fate of some of its predecessors Trustworthy functional tests are among the rarities of chemical clinical diagnosis

WHAT'S WRONG?

That champion of the nostrum interests the *Medical Standard* discusses editorially in its December issue the subject of "patent medicines" It commences

> Many people are laboring under the impression that the patent medicine business is being destroyed, thanks to the efforts of *Collier's Weekly* the *Ladies' Home Journal* and THE JOURNAL of the American Medical Association

But, continues our contemporary, this is not the case, "on the contrary, this business is really increasing" Then it quotes figures from a recent Census Bureau bulletin to prove its contention From these figures, it reaches this conclusion

> For every $1,000 paid the doctor, the people pay about $1,500 for "patents" Instead of abusing the druggists or the people who make these more or less "popular" medicines it may be well enough to ask why the people prefer this stuff to our services Possibly there is something wrong with *us*

The *premises* in the case are wrong While the amount of "patent medicines" *manufactured* in this country during recent years may have increased the amount *consumed* by the people of the United States has, to a wonderful degree, diminished Of this, there is not a particle of doubt Lessened home consumption has driven the American "patent-medicine" manufacturer to seek foreign markets — and with success As a result, the American "patent medicine" has become an evil abroad, especially in Great Britain and its colonies While we disagree with the *Medical Standard* on the essential points in its editorial, its closing sentence contains some truth There *is* something wrong with us — the medical profession That "something" we believe to be the pernicious habit of prescribing proprietary mixtures, for the public is awaking to the fact that there is very little difference between the secret or semisecret "ethical proprietary" prescribed by the physician and the secret or semisecret "patent medicine" bought over the counter A further "something" that is "wrong with us" is our easy-going tolerance as a profession, making it commercially profitable for such publications as the *Medical Standard* to exist, for the proprietary evil stands and falls with those medical journals of which the *Medical Standard* is a type As long as the medical profession will tolerate so-called medical journals owned by commercial interests, operated purely for commercial purposes, whose ethics are those of the counting-house and whose owners have no interest in the medical profession aside from the dollars that they may get from it, just so long will the proprietary evil flourish

AGRICULTURE AND PUBLIC HEALTH

The educational value of the bulletins issued by the Department of Agriculture has been repeatedly commented on and commended A list recently received from the Department of Agriculture contains the names of the new publications issued during a single month The list shows the manifold activities of the department and its intimate contact with the daily lives and needs of our farming population Among the pamphlets listed in the monthly announcement are advance reports of field operations of the Bureau of Soils Separate pamphlets contain reports of soil surveys of Jackson County, Ala, Windham County, Conn, Lowndes County, Miss, and Laclede County, Mo Among the new bulletins are pamphlets on "The Manufacture of Butter For Storage," "Feeding Beef Cattle in Alabama," "The Cowpea Weevil," "Forest Fires, Their Causes, Extent and Effects," "The Weed Factor in the Cultivation of Corn," etc Circulars on "Chicken Fat," "Hints to Poultry Raisers," "Directions for Constructing Vats and Dipping Cattle to Destroy Ticks," "Insects Injurious to Mushrooms," "Hog Raising in the South," "Cockroaches and Clothes-Moths," all containing the observations and conclusions of experts on these various subjects, are printed by the department and can be had for a few cents by any one interested The variety of topics covered by the various bureaus and divisions of this department is almost bewildering No one complains that the government is exceeding its functions or that the preparation and distribution of these pamphlets in any way interfere with religious or civil liberty Yet the scientific facts on which these pamphlets are based are exactly the same as those which form the foundation of our present knowledge of disease Chemistry is responsible for our knowledge of the human body and the way in which it works The same chemistry is the basis of soil analysis and modern methods of fertilizing Bacteriology, which gives the farmer information regarding cheese, fermentation and the diseases of animal and plant life, is the source of our knowledge regarding preventable diseases of man If the federal government can analyze the soil of Jackson County, Ala and issue a report on the conditions which it finds, why can it not inspect the physical condition of the citizens of Jackson County and report on the avoidable diseases which prevail there and the best means of preventing them? If the government can publish a report on the bacteriology of cheddar cheese, why can it not inform the people regarding the bacteriology of typhoid fever or cerebrospinal meningitis? If the preparation of a bulletin on forest fires is a proper government function, why is not a bulletin on epidemics of diphtheria their causes, extent and prevention also a legitimate activity of the government? Ignorant or prejudiced obstructionists cannot obscure the issue by talking about "schools of medicine" and "personal liberty" There are no "schools' in the domain of science The dissemination of increased knowledge has always made men free and has never interfered with their liberty

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[1] This is compiled in a paper by Mayesima J Ueber den Wert und das Wesen der Cammidgeschen Reaktion bei Pankreaserkrankungen, Mitt. a. d Grenzgeb d. Med u. Chir., 1912, xxv 403.

I HAVE GIVEN YOU MANY VALUABLE PRESENTS IN THE PAST UNCLE SAM BUT THIS ONE IS THE MOST BEAUTIFUL AS WELL AS THE MOST VALUABLE PRESENT OF THEM ALL AND YOU CAN HAVE IT IF YOU WILL TAKE IT
HEALTH
LIBERTY
PROSPERITY
RESPECT OF NATIONS
NATIONAL UNITY
DISEASE
CIVILIZATION
AMERICAN MEDICAL ASSOCIATION CARTOON SERIES

EDUCATIONAL BULLETINS OF STATE BOARDS OF HEALTH

Bulletins issued by many of the state boards of health are being used more and more for the education and enlightenment of the public rather than for the recording of long tables of statistics and formal reports In no section is the increased activity of state health authorities more marked than in the South The bulletins of the state boards of health of three Southern states which recently came in the same mail, are interesting evidence on this point The November *Bulletin of the Mississippi State Board of Health* contains a copy of the proclamation of Governor Brewer, designating November 20 as a health day, and urging the observance of the program of the state board of health on the part of all citizens The state board, cooperating with the state department of education and the Mississippi Federation of Women's Clubs presents a program for use in all of the schools in the state an outline for a course of study on public health by the women's clubs, and a comprehensive article on medical inspection of schools The November *Bulletin of the Virginia State Board of Health* contains an announcement of a lecture bureau established by the board to furnish speakers on public health topics for any community in Virginia which desires to hold a public meeting The announcement opens with the statement, "Settled in its conviction that the education of the people is the surest method of bettering the public health, the board, since its reorganization, has endeavored to place before the citizens of Virginia, in popular form, the tested truths of prevention ' In this statement lies the summary of the entire public health movement The December *Bulletin of the North Carolina State Board of Health* is devoted to the discussion of the liquor problem and public health and the relation of alcohol to public health problems An article on "The Attitude of the Medical Profession to the Use of Alcohol", a friendly talk to boys on the subject "Does it Pay to Drink Whisky?' and an article on "The Relation Between Liquor and the Death-Rate" form the bulk of the pamphlet These three pamphlets are simply selected at random from the copious supply of excellent material which is constantly being placed in the hands of citizens by many of our state boards of health This work cannot fail to enlighten and strongly influence public sentiment, which must ultimately crystallize in better legislation

Medical News

ALABAMA

New Hospitals—Watson Infirmary Decatur, has been opened by Drs W H Watson and Joseph Creer——At a meeting of Anniston physicians December 1, the Anniston Hospital Association was formed with Dr A N Steele as president and Dr T J Brothers secretary The company has rented a building on Marvin Hill for temporary use The institution will be opened to receive patients this month

Medical Staff for Y M C A.—The physical department of the Mobile Young Men's Christian Association has secured agreements from the following eleven physicians of Mobile to serve as members of the staff and to deliver from time to time during the winter, lectures on matters pertaining to health Drs. P O Chaudron, P J Howard, C A Mohr, F H.

Frazer, R C Jones, W C Gordon, A E Maumenee, A. W Metcalf, F M Inge, S F Hale and M T Ganes

ILLINOIS

Personal—Dr Frank H Jenks, Rockford, reported seriously ill, is now said to be improving and about to go home ——Dr E W Oliver has been elected secretary of the Peoria Health Service League ——Dr H L Howell, Bloomington, was operated on at the Brokaw Hospital, December 6, for appendicitis

County Districted for Medical Purposes.—President McCormick of the Cook County Board has arranged to have the county divided into districts, to each of which a physician is to be assigned A committee of seven, with Mr Sherman C Kingsley as chairman, was appointed to take charge and make recommendations

Illinois' Neglect of Epileptics—A special committee of fifty, made up of physicians social workers and others, which has been investigating for several months the condition of epileptics in the state, urges strenuously in its report that the general assembly appropriate sufficient funds to buy about 2,000 acres of unsettled ground suitable for light farming and gardening, where at least 2,000 epileptics might be cared for Efforts in other states have shown that epileptics improve in health where they can be employed out of doors at light work and kept on a carefully selected diet and under scientific care About 10 per cent of such patients have been completely cured and the other 90 per cent have been rendered at least partially self supporting and have thus ceased to be an economic burden to their homes and communities Massachusetts Ohio New York, New Jersey Kansas Connecticut, Texas Indiana and Virginia all have established epileptic colonies and Illinois thus far has been lagging far behind A bill is to be introduced providing for such a colony

Chicago

Quiet Fire in Hospital—A fire in the Monroe Street Hospital, December 9 did considerable damage but caused no panic on account of the care taken by the firemen to work silently

Medical History Society—At the meeting of the Society of Medical History of Chicago, December 12, Dr Jesse S Myer St Louis, gave an illustrated lecture on "Dr William Beaumont"

Benefit for Lynde Hospital—Friends of Lynde Hospital have arranged a benefit concert to be given at the Blackstone Theater, December 27 Lynde Hospital was formerly the medical department of Gads Hill Settlement and is in charge of Dr Katharine B Rich

New Hospital Opened—The South Shore Hospital at Eightieth Street and Luella Avenue recently opened, is a three story brick building with accommodation for forty ward patients in addition to a number of private rooms and is located on a site which has a frontage of 600 feet Drs Axel F A Werelius and Andrew V Dahlberg are respectively surgeon and physician in charge

Personal—Dr P J H Farrell was operated on for appendicitis December 15 and is reported to be doing well ——Dr Robert H Rea has succeeded Dr Frederick B Clark as superintendent of the Chicago State Hospital, Dunning ——Dr Otto F Warning has been appointed a member of the Board of Education ——Dr J N Thorpe was seriously injured in a collision between his automobile and two street cars, December 9 ——Dr Roy H Cox ambulance physician at the Chicago Avenue Police Station injured his knee in a fall while making an emergency call, December 7

INDIANA

Personal—Dr Roy A Hannell Lafayette, has been elected coroner of Tippecanoe County —Dr Charles A Underwood has resigned as health officer of Danville ——Dr Harry M Lamberson Connersville, has been elected coroner of Fayette County and Dr O P M Ford a member of the health board of Connersville

Favors State Commission on Preventable Diseases—The Commercial Club of Indiana, at a meeting December 11, passed resolutions favoring the establishment of a state commission to study the extent of preventable diseases which are said to cost the people of the state not less than $20 000 000 a year and to make a report with recommendations to the general assembly

Public Health Week.—Public Health Week was held in Frankfort, beginning December 10 A health exhibit was made in the Carnegie Library and lectures illustrated by moving pictures were given at frequent intervals The entire proceedings were in charge of Dr C A Zinn, county health officer Dr Benson A Ruddell, health officer of Frankfort, and the county and city superintendents of schools

Epileptics in Indiana.—The annual report of the Board of State Charities shows an increase of 111 epileptics sent to the state institutions during the past year There are now 957 epileptics in public institutions in the state, of whom 543 are men and boys and 414 women and girls Of these, 50 per cent are classed as feeble minded and 38 per cent as insane Only 12 per cent have no marked mental deficiency

Epidemic Diseases—Dr R. C Mackey, health officer of Hobart, on account of the prevalence of scarlet fever, ordered the public and parochial schools and theaters of the town closed for a week, and requested the suspension of worship at all public places and Sunday schools December 1 ——The small pox situation at Jasonville is said to be under control almost all of the cards have been taken down, schools have been opened and public meetings are no longer interdicted

New Laws—The committee on tuberculosis of the Indiana State Medical Society has prepared a law to be introduced during the next legislature to quarantine all people suffering from tuberculosis Public health authorities will be given sufficient legal rights to enforce the law The State Board of Health has had a public hygiene bill written which will be introduced in the legislature at the request of the Travelers' Protective Association It provides for fine or imprisonment for the proprietor of any public building such as hotels, cafes boarding houses etc, that is maintained in an unsanitary condition This bill defines what are unsanitary and unhealthy conditions Other bills have been prepared providing

1 For a civil service for county health officers
2 For the removal of the pathologic laboratories of the state from the state house
3 For empowering the state board to pass on all school house plans
4 For the establishment of a department of sanitary engineering
5 For the enlargement of the capacity of the State Pasteur Institute
6 For the enlargement of the executive offices of the state board at the state house
7 For the cooperation with other states in work on occupational diseases bad housing etc
8 For the control and eradication of cattle tuberculosis
9 For the restriction of the use of cocain to physicians and dentists
10 For the prohibiting of fraudulent advertising of medicinal preparations intended to be used for cure of diseases of man or animals

IOWA

Small Pox.—About thirty families of Ponca are in quarantine because of the prevalence of small pox, which, as is often the case was at first taken for chicken pox.

Personal.—Dr W O Smouse Des Moines has started for Germany ——Dr W H Newlon, Fort Madison, has gone abroad ——Dr Charles Ryan, Des Moines, who was operated on for appendicitis at Lakeside Hospital, Cleveland, November 25 is reported to be doing well ——Dr F J Will has resigned as local surgeon to the Chicago and Northwestern System at Des Moines and has been succeeded by Drs O J Fay and A C Page ——Drs G B Little and Bertha McDavitt Burlington were thrown from the automobile in which they were riding and painfully injured ——Drs W L. Bierring William Pearson and Erwin Schenk have been appointed as an advisory medical committee to the school board of Des Moines ——Dr J C Powers, Hampton, who is under treatment in a hospital in Chicago for an infected wound of the hand is reported to be improving

KENTUCKY

New Officers—Henderson County Medical Society at Henderson December 10 *president*, Dr R H Moss, *secretary treasurer* Dr P Ligon

Explosion in Sanatorium—A boiler exploded in the laundry and kitchen building of the Hazlewood Sanatorium near Taylor Boulevard Louisville, November 25 and the building was burned to the ground No one was injured and it was not necessary to remove the patients from the institution

Personal—Dr John G Cecil has resigned as a member of the executive committee of the medical department of the University of Louisville, and has been succeeded by Dr J Garland Sherrill The committee is now composed of Drs W I Grant J B Marvin, Clint Kelly, J M Ray, W H Wathen and J M Bodine, besides the new member

Scovill's Successor—The trustees of the State University of Kentucky confirmed the selection of Dr Joseph H Kastle for director of the Agricultural Experiment Station and dean of the College of Agriculture. Dr Kastle was formerly in the government employ in the Bureau of Animal Industry and had the unanimous endorsement of the entire force of the experiment station for the position of director to succeed Professor Scovill

Hospital Notes—Beginning December 1, Speers Hospital, Dayton, will become the annex hospital for the Chesapeake and Ohio Railroad Heretofore employees of the company who required treatment have been obliged to go to hospitals at Clifton Forge or Huntington, W Va——The Martinsville Sanatorium, Louisville, was damaged by fire to the extent of $10,000, October 30——The new hospital at Paris, Ky, will be ready for occupancy by December 1——Highland Hospital, the first hospital to be established in the mountain region of Kentucky, has recently been dedicated The establishment of this hospital is the result of the efforts of Rev E O Guerrant, mountain evangelist——Drs J N and A T McCormack and Lillian H South have sold St Joseph's Hospital, Bowling Green, to Dr T O Helm This includes the franchise, nurses' training school, operating outfit and the entire equipment of the institution

MARYLAND

New Officers—Calvert County Medical Society president Dr O D Simmons, Bowens, secretary, Dr John W Leitsch, Huntingtown

Hospital Opened—The Allegheny Hospital of the Sisters of Charity, Cumberland, with accommodation for one hundred patients, was opened for inspection December 9

Academy Introduces Inspection.—The Academy of Medicine of Cumberland has formally endorsed the recommendations of Governor Goldsborough at the semi annual meeting of the Medical and Chirurgical Faculty of Maryland, that a state sanitary and a state dairy inspector be appointed, with deputies in each county

Personal—Dr Ralph W McDowell, Annapolis was seriously injured in Philadelphia, November 29, in a collision between the taxicab in which he was riding and a trolley car——Dr William P E Wyse, Pikesville, has been awarded a verdict for $2,000 on account of injuries sustained by him two years ago in a collision between automobiles

Baltimore

New Officers—University of Maryland Medical Society, December 10 president, Dr Nathan Winslow, secretary, Dr A L Fehsenfeld

Measles on Steamer—The North German Lloyd Steamship *Main* arrived at Baltimore, December 7, with thirty seven cases of measles and twenty three suspects

Sanitary Equipment Adopted by Railroad—The Baltimore and Ohio System has equipped its passenger trains and stations and lavatories with sanitary paper roll towels It has also abolished the public drinking glass, replacing it with individual cup service

Personal.—Dr John J Rennington, who was severely injured in a fall from a street car, December 9, has returned home——Dr George C Wegefarth was operated on for appendicitis December 12, at the Church Home and Infirmary——Drs Anna D Abercrombie and John Travers have been appointed medical inspectors under the child labor law——The following have been appointed as the advisory board by the Home for the Widows and Orphans Cardinal Gibbons, Hon Henry Stockbridge and Drs Lewellys F Barker, Hugh H Young, Hon W T Finney, Randolph Winslow, Charles O Donovan, T C Gilchrist, D W Cathell and J G Jeffers

MASSACHUSETTS

New Officers—Somerville Medical Society, December 5 president, Dr E D Pillsbury, secretary treasurer, Dr Allen H Blake, both reelected

Personal.—Dr James A Honeij, Cambridge, has been appointed by the State Board of Charities assistant physician at the Leper Colony, Penikes Island He will have the use of the laboratory of the Harvard Medical School and will make a study of the fifteen cases of leprosy now on the island——Dr Franz L. F E Pfaff has resigned as professor of pharmacology and therapeutics in Harvard Medical School and will take a vacation of two years——Dr Louis M Spear has been appointed physician in chief of the Peter Bent Brigham Hospital, Dr Edward P Richardson, surgeon, and Dr Charles F Painter, orthopedic surgeon

Hospital Notes.—At the annual meeting of the Boston Floating Hospital, November 7, Dr Samuel H Durgin was elected a trustee and Dr Henry C Marble, resident physician——Ground was broken recently for the new St Elizabeth's Hospital Brighton The ceremonies were in charge of Cardinal O'Connell, president of the hospital corporation——A fire in the store room of the Emerson Hospital Forest Hills, destroyed many valuable medical books——The new buildings of the Talitha Cumi Maternity Home, Forest Hills, were formally opened, October 20 by Bishop Lawrence The home is under the management of Drs I M Hastings and F M Plummer Dr Elizabeth Ritter Brookline is resident physician and Dr William F Wesselhoeft, consulting physician——The Pittsfield Antituberculosis Association has awarded the contract for building a new central house on the Roberts Camp at West Pittsfield, to cost $15 000——At the rummage sale for the benefit of the Boston Babies' Hospital, October 24, more than $4 300 was realized for the institution——The Women's Charity Hospital Club has voted to change the name of its hospital to the Massachusetts Women's Hospital——The executive committee of the Burbank Hospital, Fitchburg, has been authorized to build a tuberculosis hospital at a cost of about $28,000——The new Melrose Hospital was damaged by fire recently to the extent of $1,500——The new Marlboro General Hospital was opened without formal exercises, December 6 The building, which has cost $57 000, is of concrete construction and consists of an administration building and two wards The institution will accommodate about thirty six patients

MINNESOTA

Personal—Dr J Frank Corbett city bacteriologist of Minneapolis, has resigned——Dr Lattan A Crandall has been reelected president of the Minneapolis Child Welfare Association

Norwegian Hospital—The Hoyme Hospital Association has purchased a site for the institution at Twenty Sixth Avenue West and Fourth Street, Duluth on which it proposes to erect a hospital to cost about $50 000 Dr H N Hovde is vice president of the association and Drs J M O Tufty and O J Heimark are directors

Free Eye Dispensary—The University of Minnesota Free Dispensary has created an optical department which will be under the charge of Dr Frank C Todd of the medical faculty

New Officers—Southwestern Minnesota Medical Association at Luverne, November 12 president Dr L L Sogge, Windom, secretary treasurer, Dr Emil King, Fulda Windom was selected as the next place of meeting——Southern Minnesota Medical Association at Mankato, December 4 president, Dr A B Stewart, Owatonna, secretary, Dr W T Adams Elgin——Midway Medical Association met for organization December 9, Dr Frederick E Leavitt, St Paul, acting as chairman

MISSOURI

District Health Society Organized.—Representatives of the health departments of the twenty six counties and cities of western Missouri designated as the seventh district, met in Springfield, November 21 and organized a district society electing Dr J M Billings, Lebanon, president, and Dr W M West, Monett, secretary

Personal.—Dr Harry Czarlinsky Kansas City, has been elected coroner of Jackson County—Dr George P Pipkin Kansas City, underwent operation for appendicitis at the Kansas City General Hospital, November 7——Dr W L Gist city physician of Kansas City has been placed in charge of the ambulance corps, National Guard of Missouri, with the rank of captain

Tuberculosis Hospital Districts—Buchanan County Tuberculosis Hospital District is the first to be organized on the law passed by the last legislature The governor has appointed the following as commissioners for the district Colonel James H McCord, Mr George Schneider, Mr Eugene Westheimer, Dr Daniel Morton St Joseph and Colonel J A Corby The establishment of the district assures care for those suffering from tuberculosis as soon as the board can get the necessary agencies at work

St Louis

Diphtheria—The local board of health reports at least four hundred cases of diphtheria in addition to a great number of suspected cases

New Officers—St Louis Medical Society, November 25 president, Dr Louis H Behrens, secretary, Dr Frederick C L Kuhlman (reelected)

Personal.—Dr D F Rice was slightly injured in a collision between the automobile in which he was riding and a trolley car December 2——Dr Louis R Padberg has been elected coroner of St Louis, vice Dr Jules Baron

Diphtheria Epidemic—The discovery of twenty three cases of diphtheria in the industrial school has caused the isolation of the patients in the contagion hospital, and the prophylactic administration of antitoxin to 318 children

NEW YORK

Tuberculosis Hospital for Saratoga County—The application of the supervisors of Saratoga County for permission to establish a hospital for the treatment of tuberculosis in the town of Providence, Saratoga County, has been approved by the State Commissioner of Health

Personal—Dr William T Pearson has been elected superintendent of the Glenridge Sanatorium to succeed himself——Dr and Mrs George H Dill, Fort Plain, have started for California——Dr Maurice J Lewi has resigned as secretary of the State Board of Medical Examiners and Dr Otto Von Huffman of New York City has been appointed in his place

International Water Pollution—The November bulletin of the State Department of Health calls attention to the fact that a question has arisen with reference to the extent of the jurisdiction under the treaty between the United States and Canada, whether the International Joint Commission may properly consider pollution of waters on either side of the international boundary line, which by diffusion or otherwise, do not extend over and pollute the waters on the other side of the boundary line When this question of jurisdiction is settled, the State Commissioner of Health will appear before the commission by invitation at a hearing to be held in Washington and will explain the attitude of the State Department of Health with regard to the pollution of streams, and will present a report showing the action of the state on all applications for permission to discharge sewage into boundary waters between New York and Canada

New York City

Personal.—Dr Edgar G Janeway, who died Feb 10, 1911, left an estate appraised at $481,500——Dr M Rabinovitz, adjunct gynecologist to the Beth Israel Hospital, has been appointed visiting gynecologist to Sydenham Hospital Richard Lake, F R C S, lectured before the Section on Otology of the New York Academy of Medicine December 14 on "The Clinical and Therapeutical Aspects of Vertigo"

To Raise Money for Bronx Hospital.—An industrial exhibit is being held in the Grand Central Palace for the benefit of the Bronx Hospital to which the admission fee is one dollar Each ticket entitles the bearer to one dollar's worth of goods It is said that $500,000 worth of goods will be distributed The new Bronx Hospital, which is to supplant the present institution, will cost about $350 000 and will contain over 200 free beds The dispensary will be equipped to treat about 100,000 patients a year

Letchworth Village Contracts Ready to be Let—Letchworth Village, an institution for the segregation of epileptics and feeble minded for which the state has acquired a large tract of land at Thiells near Haverstraw, is to be begun in the near future The plans for the institution have been completed and the group of buildings to be constructed consists of four dormitories, an attendants' home a dining hall, a power plant and a storehouse At the last session of the legislature $457,000 was appropriated for this purpose Ultimately the village will consist of six groups of buildings, each consisting of eight dormitories, an industrial building, and a school house Each group of buildings will have accommodations for 500 inmates

Endowment for Work Among Defectives—The new Clearing House for Defectives which was established recently in connection with the Department of Charities has been doing its work with the aid of volunteer surgeons associated with Dr Max G Schlapp Commissioner Drummond presented the needs of this work at a recent meeting of the Woman s Municipal League and as a result an endowment sufficient to secure its permanency and to enable it to open all necessary records and make investigations has been secured through the generosity of Mrs W K Vanderbilt, Mrs August Belmont, Mrs Hewitt and Mrs Seligman An important part of the work will be the creation for the first time in this country of a systematic record of all defectives known to be at large

NORTH CAROLINA

Work of the Hookworm Commission—The hookworm commission, operating under the direction of Dr J A. Ferrell, assistant secretary of the State Board of Health, is composed of six physicians eight microscopists and one stenographer Up to December 1, 148,993 examinations had been made in the state and 98 730 persons had been treated The Rockefeller Commission spent in this work $20,000 and the State Board of Health $6,000, while the sixty counties in which the commission has operated have contributed approximately $15,000 to provide accommodation for the hookworm laboratories, advertise the work that is being done and pay for the medicines used Usually from five to eight dispensaries were established in each county and the work of examinations and treatments occupied about six weeks Public health pamphlets are distributed and it is believed a great impetus to general sanitation will be the result of the work Continued observations verify the earlier suggestion of Dr Stiles that the disease is found much more frequently in sandy districts than in clay subsoil For instance, the examinations of the suspects in Richmond County show 38 per cent infection as contrasted with 17 per cent in Buncombe County

OHIO

Hospital Notes.—Memorial Hospital, Elyria, will hereafter receive annually an appropriation of $6,000 from the city instead of $5,000, as heretofore——St Elizabeth's Hospital, Youngstown, opened to receive patients December 8

Hoover in Des Moines.—Dr C F Hoover, Cleveland, was the guest of hono of Des Moines (Ia) Pathologic Society at its November 15 meeting and delivered an address on "Respiratory Ventilation of the Lungs in Health and Disease"

Small Pox.—The illness of ten patients in the State Hospital, Toledo and of five employees, which had been diagnosed as chicken pox, has been pronounced small pox and the patients and 100 other patients and employees who had been exposed are in quarantine——Seven cases of small pox are reported in Zanesville and a theater and all moving picture shows have been ordered closed

Personal.—Dr J W Piper, Bethesda, who has been seriously ill with pneumonia, is reported to be improving——Dr C H Bailey, East Liverpool, has been appointed tuberculosis inspector with jurisdiction over all potteries in East Liverpool Wellsville, Chester and Newell——Dr J W Costolo, superintendent of the District Tuberculosis Hospital, Lima, has resigned and will resume practice in Sidney——Dr J W McKemy, Dayton, has been elected coroner of Montgomery County——Dr G O Maskey, Upper Sandusky, has been appointed local surgeon of the Columbus, Hocking Valley and Toledo Railroad——Dr W M Buchrer, Cleveland, has been appointed superintendent of the new tuberculosis hospital, Warrensville, Cleveland, which is to be opened January 1——Dr R H Grube, Xenia, has been elected dean and Dr P R Madden Xenia, secretary of the Ohio Soldiers' and Sailors' Orphans' Home——Dr A. Delaplane, formerly physician at the State Penitentiary, Columbus, has been appointed assistant medical examiner of the Pennsylvania System between Chicago and Pittsburgh, with headquarters at Fort Wayne, Ind——Dr H T Phillips, Athens, coroner of Athens County has been elected probate judge of the county and will take office, February 9, next

WEST VIRGINIA

Society Honors Governor-Elect—The Medical Society of McDowell County, at its last annual session, December 11 elected Dr J Howard Anderson Marytown, president and Dr S D Hatfield, Iaeger, secretary The society adopted resolutions appreciating the confidence reposed by the people of the state in Dr H D Hatfield, Eckman a member of the society, in electing him governor—the first time a member of the medical profession in the state has been so honored, congratulating Dr Hatfield on the distinction conferred on him and on the reflected glory brought on the medical profession of the state and his county society, and pledging him hearty support during his administration, with special reference to state wide hygiene and sanitation

GENERAL

Prize Offered for Work on Diabetes—The local medical society at Carlsbad has offered $1,000 (5,000 crowns) for the best work or works on 'Treatment of Diabetes Mellitus with Special Reference to Balneotherapy" Competition is open to physicians of all countries, and any language may be used All communications should be addressed to the Vereinigung Karlsbader Aertze, Carlsbad, Austria The jury consists of von Jaksch of Prague Lüthje of Kiel, Ortner of Vienna, Schmidt of Innsbruck and Dr Ganz Articles must be received by Dec. 31, 1913

American Society for Physicians' Study Travels—Philadelphia has taken the lead in the organization of a society with this name patterned after the Deutsches Zentralkomitee für ärztliche Studienreisen This German organization, it will be remembered, sent a party throughout the United States, in connection with a visit to the International Congress on Hygiene and Demography at Washington It was the fourteenth annual tour of the kind The party and its trip were described in The Journal, August 24, page 662, August 31, page 731, September 7, page 812, and in subsequent issues The success of the trip and the interest taken in the entertainment of the members by members of the medical profession in the various cities visited have awakened a desire for a similar organization in the United States At a subscription dinner in Philadelphia, December 7, a committee was appointed to organize the American Society for Physicians' Study Travels Dr James M Anders was elected chairman Speaking for his committee, Dr Anders asks all American physicians interested in this proposition to correspond with him at 1605 Walnut Street, Philadelphia Clinics can be arranged in advance, lectures prepared and visits made to the best hospitals and health resorts, with the assurance of a hearty welcome from the leading medical men of the localities visited Dr Anders seeks to have this society represent the American medical profession with all the medical centers represented in its membership So many physicians go abroad each year that the prospect looks bright for a successful organization in this country, and Dr Anders will be glad to hear from all who are able to consider the matter at all seriously In this connection it should be stated that tours are being arranged in connection with the International Medical Congress at London, August, 1913, by Dr Richard Kovacs, New York City, and by Dr C W Fassett, St Joseph, Mo

LONDON LETTER

(From Our Regular Correspondent)

London, Dec. 7, 1912

International Congress of Medicine

The International Congress of Medicine which is to be held in London next August will be one of the largest international gatherings held in this country for many years It is expected that at least five thousand physicians will be present as delegates Of those about two thousand will probably come from Great Britain and other English speaking countries, about one thousand from Germany, one thousand from France and one thousand from other countries For its largest meetings the congress will assemble in Albert Hall There are twenty six sections and subsections, most of which will meet daily, the meeting places must therefore necessarily be somewhat scattered in various parts of London The forthcoming congress will probably surpass all its forerunners in numbers It will certainly show a marked advance on the last meeting in London in 1881, the seventh meeting of the congress, when the delegates numbered about three thousand The present is the seventeenth meeting The increasing specialization of medicine is illustrated by the fact that the sections for the discussion of particular branches of medicine have grown from fifteen in 1881 to twenty six at the forthcoming meeting The congress of 1881 over which Sir James Paget presided was notable for the presence of Huxley, who spoke on the subject of heredity, and, of Pasteur While the program of the coming congress does not contain any names so great as these, nearly every distinguished man in British medicine is among the officers, presidents of the sections, or contributors of papers The congress will be presided over by Sir Thomas Barlow, president of the Royal College of Physicians The general addresses to the full congress in the Albert Hall will be given by Professor Chauffard of Paris, on medicine, Geheimrat Professor Paul Ehrlich of Frankfurt, on pathology, Mr John Burns, M P, on public health, Prof Harvey Cushing of Harvard University, on surgery, and Mr W Bateson, F R.S, on heredity The proceedings in the sections will be conducted mainly in English, French, German and Italian, but, with the assistance of interpreters, the delegates may speak in any language Some of the subjects to be discussed are of more than professional interest, such as the psychology of crime, which is to be considered at a joint meeting of the forensic medicine and psychiatry sections The causes of epidemic diseases and the effects of dust in producing diseases of the lungs are to be considered in the section of hygiene The forensic medicine section will discuss the causes and prevention of suicide, and the tropical medicine section the subjects of plague and beriberi To promote imperial feeling the British committee has appointed on the various committees representatives of the profession in the oversea dominions When it was first proposed to hold the meeting in London the invitation was given on behalf of members of the profession in Great Britain only Many representatives of Canada, Australasia and India have now been nominated and the whole empire will now play the part of host to the congress A fund is being raised to meet the expenses of the meeting, which are expected to amount to $40,000

The National Insurance Act Decision of the British Medical Association Still in the Balance

Though there are only six weeks before the medical benefits of the national insurance act come into force, the British Medical Association has not yet given its decision whether to work the act or not The following concessions were made by the Chancellor of the Exchequer, Mr Lloyd George, in his final interview with the deputation appointed by the British Medical Association The first point raised was as to the scope of the services which the insured person might demand The reply is 'The insured person cannot demand services beyond those which every member of the panel may reasonably be expected to give The treatment which the practitioner undertakes to give is that which can properly be undertaken by practitioners of ordinary competence and skill" It was pointed out that a physician may have acquired special skill in some branch and be able to perform an operation which no one without special skill could undertake The insured person cannot require that as part of his medical benefit To decide whether any disputed case comes within the agreement it is proposed that the local insurance committee (consisting mainly of laymen) shall, if necessary, refer it for decision to a court of reference set up for the purpose by the government Certain duties, although coming within what will be required as medical benefit, have been distinguished for some time as "extra" Examples are minor operations, setting fractures, night visits etc Payment of these extras depends on the method adopted for distributing among the physicians in each area the amount available for that area Some districts may decide on a capitation payment, each physician receiving so much per head for all risks whereas others may set aside a portion of the total amount available to provide a pool out of which the fees for extras would be paid As a deterrent against unreasonable demands the deputation asked that the physicians should be allowed to make a small charge for night and special visits This was refused as impossible, but it is proposed to meet the point by giving the insurance committees power to fine insured persons, or in the case of repeated offenses to suspend from medical benefit those who make unreasonable demands on the physicians attending them On the question of mileage for country physicians (mentioned in a previous letter) the government considers the capitation rate offered sufficient, as these physicians are allowed to dispense their own medicines and thus receive the profits which in the case of the city physicians go to the pharmacists The government, however, recognizes that in some parts of the country exceptionally sparsely populated the physicians would be at a disadvantage Parliament will therefore be asked to provide a small fund for such areas Physicians will be required to keep only such records as will furnish information as to the incidence of disease It is pointed out that no regulations could be framed to exclude the insurance committee from power to consider complaints against a physician and that for the protection of physicians a provision had been inserted in the regulations a complaint should not be considered by the insurance committee until it had been sifted in private session by a body in which the physicians and the insured would be equally represented The government has acceded to the request that the medical members of each insurance committee shall constitute not less than one tenth of the whole

THE ACTION OF THE BRITISH MEDICAL ASSOCIATION

The report of this final conference with the Chancellor of the Exchequer has been considered by the council and several protracted sittings, one lasting as long as eleven hours, have been held As stated in previous letters there are two parties on the council, an extreme and a more moderate one It seems, therefore that under the circumstances the council could not give any lead to the association The intention to send with the report of the final interview with the Chancellor a covering letter to the divisions of the association has therefore been abandoned Meetings of the divisions are about to be held all over the country to determine finally whether the association will work the act o To ll physicians, whether members of the a n been invit

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act Their number appeared to be very small, but the recent concession of the government has, as anticipated, increased the number of those willing to serve Moreover, a certain political element exists in the situation It is quite true that the majority of physicians, whether liberal or conservative, opposed the act on purely professional grounds and some of its most vehement opponents have been prominent liberal supporters of the government At the same time the conservative press has tried to make as much party capital as possible out of the dissatisfaction of the profession and at the meetings of the association the intensified virulence of those who were opposed to the government on political, as well as professional grounds, was evident A marked example is the president of the association, Sir James Barr, into whose unmeasured denunciation of the act the political bias so strongly entered that protests have been made by members of the association On the liberal side there has been little evidence of party feeling entering into the controversy Dr Esmonde, an Irish member of Parliament, who was once in general practice, has announced, however, that the government has met the physicians fairly and he has invited communications from those willing to work the act He claims to have received a large number of responses In consequence of the Home Rule question the members of the Irish party are strong supporters of the government While there are no grounds for saying that Dr Esmonde is not doing what he honestly believes to be in the interests of the profession, one cannot help feeling that the motive of countering the attack made by the conservative party against the act enters into his action At the eleventh hour there has also been started a new association termed "The National Insurance Practitioners' Association," which has sent a circular to every physician asking if he is willing to serve This association recognizes the good work which has been done by the British Medical Association in securing better terms from the government, but in consequence of these terms it holds that the undertaking not to work the act except on conditions approved by the British Medical Association is no longer binding Before issuing this circular they would have waited until the council of the British Medical Association had reported and an opportunity been given them of recording their votes, but a circular sent out to the members of the Westminster provisional medical committee of the association has made this impossible This circular states that "the number of doctors willing to work the act on any terms must be very few indeed" and that "it is only on matters of detail as to the best method of carrying on a campaign of resistance that differences exist" The founders of the new association say that it is their duty to the public as well as to themselves to take service and that they have formed the new association, not out of any disloyalty to the British Medical Association, but for the protection of their own interests To say the least, it seems unfortunate that they did not delay their manifesto until the decision of the association has been given The time for making arrangements for the working of the act, however, is now very short

PARIS LETTER

(From Our Regular Correspondent)

Paris, Nov 22, 1912

The Fight Against the Decrease of Population

A decree has been issued for the formation by the minister of finance, M Klotz, of an extraparliamentary commission (including several physicians) for the study of national, social and fiscal questions concerning the decrease of population in France and of seeking the means of remedying the condition For several years the legislative chambers and successive governments have considered the problem, but up to the present nothing has been accomplished except half way measures, because the fiscal side of the question has been neglected

The Lowest Pulmonary Capacity Compatible With Life

At one of the recent meetings of the Académie des Sciences, Drs Léon Bernard, A Le Play of Paris and Charles Mantoux of Cannes reported the outcome of their researches on the lowest pulmonary capacity compatible with life They employed a special technic suggested by the treatment of pulmonary tuberculosis by means of artificial pneumothorax, following the procedure of Forlanini The principle was to immobilize the lungs in such a way that their movement was restricted to the lowest limit compatible with the maintenance of life This immobilization was accomplished by means of nitrogen the resorption of which is negligible This gas is injected at first into the right pleura to the point of complete immobilization, and then into the left pleura to a certain limit where the experiment stops Then skiagraphic and fluoroscopic examinations are made By these means different factors can be determined, such as the quantity of gas injected and the volume and weight of the lungs, which permits by a simple calculation a determination of the lowest capacity of the lungs compatible with life This has been found to be about one sixth of the total lung capacity

The Struggle Against Alcohol

As I have told in a preceding letter, the Chamber of Deputies by a vote of 361 to 155 postponed the passing of the law voted by the senate to limit the number of liquor licenses (The Journal, March 16, 1912, p 794) This vote has caused much disappointment The Académie de médecine and a large number of medical societies have protested against the postponement of this reform, the most urgent of all The Ligue nationale contre l'alcoolisme, presided over by Professor Debove, formerly dean of the Faculté de médecine of Paris, has issued an appeal to French women to initiate one of these movements against which political assemblies can fight only in vain To combat the distillery, that formidable financial trust supported by 400,000 tavern keepers, the league invites French women *en masse* to sign a petition which cannot fail to impress the Chamber of Deputies

Prizes Awarded to Finlay and Agramonte

Among the prizes offered for competition by the Académie des Sciences the most important is the Bréant prize (100,000 francs $20,000) for the cure of Asiatic cholera Naturally this prize has not been awarded this year, but from the income from the foundation the academy has awarded a prize of $500 (2,500 francs) to Dr Carlos J Finlay of Havana and another of equal value to Dr A Agramonte of Havana for their work on the rôle of the mosquito in the propagation of yellow fever

BERLIN LETTER

(From Our Regular Correspondent)

Berlin, Nov 22, 1912

Personal

Professor Gumprecht of Weimar has been appointed to deliver a brief course of lectures on social and economic questions of interest to physicians

On November 20, Professor Stieda of Königsberg celebrated his fiftieth anniversary as dozent

Professor Czerny of Strasburg has accepted the call as successor of Heubner

Practice of Foreign Physicians in German Watering Places

In spite of the fact that persons who are not licensed in Germany are not allowed to call themselves physicians or to use any similar title, for many years foreign physicians, mostly Russian, have been carrying on an extensive practice in Germany, particularly among their own countrymen in Berlin and the cosmopolitan watering places On motion of the medical Bezirksverein at Kissingen, the Bavarian medical chambers have taken a stand against this unauthorized competition and asked the Bavarian government to use its influence to forbid the carrying on of practice in any form by physicians who are not licensed in Germany

The Robert Koch Tuberculosis Foundation

The Robert Koch foundation for the elimination of tuberculosis which was established five years ago in memory of the discovery of the tubercle bacillus, with a capital fund of 1 250,000 marks ($312,555), has already expended nearly 100 000 marks ($25,000) for promotion of research on tuberculosis At its last session, early in November, an allowance of 3,000 marks was granted for studies on vital staining and tuberculosis, and 1,500 marks for investigations of tubercle bacilli in the blood stream

Expenses of the Prussian Universities

The ordinary expenses for the Prussian universities have increased since 1868 from about 4,000,000 ($1,000,000) to 21,000,000 marks ($5,250,000) in 1911 Corresponding to this, there is also to be noted a marked increase in the number of students The average registry in the Prussian universities has increased from about 7,500 in 1868 69 to about 28,000 students in 1911 12 Hence, the number of students had increased by about 280 per cent, whereas the expenses have increased by 435 per cent In 1868 there were expended for the individual student 536 marks, in 1911, 753 marks About three fourths of the expenses of the universities are covered at present by the government, the remainder coming from the income of the universities, as well as from foundations and other funds

Quiet at Health Resorts

The German committee for hygienic arrangements in health resorts and watering places discussed at its last session the important theme "Quiet at Health Resorts" The following resolutions were adopted for regulating public traffic 1 In the construction of street pavements, noise suppressing reinforcement should be used according to local conditions (Wood, asphalt, macadam, stone pavement is to be avoided as much as possible) 2 Limitation of the street traffic in such a manner as to afford the necessary rest to the guests of health resorts (Prohibition of fast driving of automobiles and other vehicles, prohibition of unnecessary use of horns and whistles and the cracking of whips, limitation of the use of bells and whistles on local railroads and steamship traffic Control of the traffic of freight wagons Practicable limitation of all kinds of noise which disturbs the quiet, with some exceptions which must be approved by the police (such as moving etc) 4 Prohibition of noisy plays of children and of noisy calls by street peddlers 5 Restriction of keeping noisy animals (fowls, cats, dogs, etc) 6 Permission of only the most necessary bell ringing, elimination of the striking apparatus of public clocks 7 Limitation of the construction of buildings to the slack season at the resorts

For the houses the following resolutions were passed 1 The greatest possible deadening of walls and ceilings in the lodging houses 2 The kitchens, water closets, bathrooms, rooms with machinery and rooms for amusement must be arranged so that those living in the house may not be annoyed by the noise produced in such rooms 3 Establishment of certain hours for the beating of rugs, furniture and bedding 4 Restriction of noisy plays of children in the courts, halls and gardens 5 Training the house-servants to perform all their duties with the least possible noise 6 The greatest possible limitation of playing on musical instruments and singing with open windows and in buildings which are not sound proof

Population of the German Empire According to Age

The age relations of the population of Germany, according to the census of 1910, may be summed up in the following table

	Males	Females	Total
Population in 1910	32 040 166	32 885 827	64 925 993
15 years old and under			22 107 930 *
Born before 1851	2 271 366	2 842 838	5 114 204
Aged 15 to 60	18 660 908	19 042 951	†

* 34 1 per cent † 58 per cent

Marriages

Beulah B Richmond M.D, Skelton, W Va, to Miss Florence Josephine Ballard of Long Beach, Cal, November 20

John A Froelich, M D Princeton, Wis, to Miss Emma Williams of Palmyra, Wis, at Milwaukee, November 27

John Charles Norton, M D, Hagerstown, Md, to Miss Ruth Cleveland Atkinson of Baltimore, December 3

Herman H Tuttle, M D, Springfield, Ill, to Miss May L Suddick of Joliet, Ill, at Ottawa, Ill, December 5

Henry Hopson Wilcox, M D, Springfield, Mass, to Miss Emily Jane Wagner of Brooklyn, December 5

George H Scott M.D, U S Army, to Miss Margaret Fleanore Pillow, at Butler, Pa, December 5

Thomas B Kern, M D Allentown, Pa, to Miss Frances Middleton of Philadelphia, November 28

John M Dickson, M D, to Miss Florence L Williamson, both of Cambridge, Mass, recently

Esmond Austin Childs, Geneva, O, to Miss Mary Summers, at Toronto, Ont, November 26

Elmer Lee Cox, M D, Salem, Ia, to Miss Winnifred Childs of Ottumwa, Ia, November 21

C Clayton Koons, M D, to Mrs Grace Roberts, both of Larned, Kan, November 27

Joseph B Unsell, M D, to Miss Willella Stark, both of Louisiana, Mo, December 4

Camden B Eddy, M D, to Miss Mary L Harris both of Louisville, November 28

Calvin Edgar Brown, M D, to Miss Leila Haerther, both of Chicago, December 6

Deaths

Henry Moore, M D Kentucky School of Medicine, Louisville, 1864 a veteran of the Civil War, for many years superintendent of the Midland Railroad Company formerly a member of the board of trustees of the Indiana State School for the Deaf, chairman of the original commission appointed by the Indiana legislature to investigate the practicability of establishing a State Tuberculosis Hospital and later chairman of the board of trustees of the State Tuberculosis Hospital, Rockville, Ind state organizer of the National Red Cross Antituberculosis Campaign, died in his office in the State House, Indianapolis December 2, from cerebral hemorrhage, aged 72

George Clinton Crandall, M.D University of Michigan, Ann Arbor 1890, a member of the American Medical Association professor of medicine in the St Louis University, formerly a member of the medical staff of the Northwestern Michigan State Hospital Traverse City Mich president of the consulting staff of the St Louis City Hospital, consulting physician to St Ann's Lying In Hospital, and medical director of the St Louis Society for the Prevention and Relief of Tuberculosis died at his home in St Louis, December 5, from nephritis, aged 47

Rem Lefferts Disbrow, M D College of Physicians and Surgeons, New York City, 1862 a member of the Medical Society of New Jersey, first president of Ocean County Medical Society, surgeon of the Fourteenth New York Volunteer Infantry during the Civil War, for several years a president and director of local banking and trust companies a member of the board of freeholders and county board of election, died at his home in Tom's River, November 11, from senile debility, aged 77

Nathan Gideon Ward, M D Jefferson Medical College, 1893, a member of the American Medical Association, president of the Philadelphia Chemical Association, clinical professor of laryngology and rhinology in Temple University, Philadelphia, aurist and laryngologist to St Agnes Hospital ophthalmologist to Charity Hospital and also a member of the staff of the Samaritan and Garretson hospitals Philadelphia, died at the home of his parents in Elizabeth City, N C, December 3 aged 47

William B Crum, M D Howard University, Washington, D C, 1880 a prominent colored practitioner of Charleston, S C once surgeon in the National Guard of the state and visiting physician to the Charleston Negro Hospital, appointed collector of the Port of Charleston in 1902, and minister resident to Liberia and consul general at Monrovia in 1909 died in Charleston, December 7, from fever contracted at his post of duty in West Africa, aged 53

Ellsworth Eliot, M D College of Physicians and Surgeons New York City, 1852, trustee and registrar of his alma mater for several years, a member of the American Medical Association and New York Academy of Medicine, and president of the Medical Society of the County of New York in 1872, also president of the Society for the Relief of Widows and Orphans of Medical Men died at his home in New York City December 9, from bronchitis, aged 85

Elizabeth Simpson Mitchell, M D Queens University Kingston, Ont, 1888 L R C S, L R C P Edinburgh, L F P S Glasgow, L S A London, 1888, the first woman to receive a license to practice in the Province of Quebec a practitioner of Montreal until 1909 when she moved to Bournemouth England died in Nashua, N H, November 30 aged 48

Cornelius P Meredith, M D Pulte Medical College, Cincinnati, 1881, of Louisville, Ky, formerly president of the Southwestern Homeopathic Medical College and at one time a member of the Kentucky State Board of Health, a Confederate veteran, died in the home of his son in Louisville December 2, from uremia, aged 73

Charles Henry Thompson, M.D College of Physicians and Surgeons New York City, 1868 a member of the Medical Society of New Jersey mayor of Belmar, N J, from 1891 to 1893, for two terms a member of the borough commission of Ocean Beach, died at his home in Belmar, December 3 from disease of the intestines, aged 69

Henry Sayre [illegible] York University, New York City 1861, a me[illegible] [illegible]ican Medical [illegible]tion
of Los Angeles, [illegible]
cine in the Uni[illegible]
titioner of Los [illegible]
ber 29, aged [illegible]

George Edwin Jones, M D Medical College of Ohio, Cincinnati, 1859, a member of the American Medical Association, formerly of Evansville, Ind , acting assistant surgeon, U S Navy, during the Civil War, died at his winter home in St Augustine, Fla , November 29, from cerebral hemorrhage, aged 77

John Young, M.D University of Michigan, Ann Arbor, 1874, a member of the American Medical Association, a pioneer practitioner of Presque Isle County, Michigan, and for more than twenty years chairman of the county board of supervisors, died at his home in Onaway, December 3, from heart disease, aged 66

Albert E Johnson, M D George Washington University, Washington, D C , 1869, formerly a member of the American Medical Association, a member of the Medical Society of the District of Columbia, at one time city physician of Washington, died at his home in that city, about November 5, aged 72

John Rogers Merrill, M.D College of Physicians and Surgeons, New York City, 1886, a member of the Medical Society of New Jersey, a practitioner of Paterson, N J , until October last, when he moved to Pasadena, Cal , on account of his health, died at his home in that place, December 1, aged 51

Charles Emory Rogers, M.D Bellevue Hospital Medical College, 1880, a member of the American Medical Association, local surgeon of the Milwaukee System at Montevideo, Minn , and founder of the Montevideo Hospital, died suddenly at his home, December 3, from angina pectoris, aged 62

Edgar D York (license, Kansas, years of practice, 1901), a practitioner of Rawlins County since 1881, representative in the legislature in 1887 1888 and 1891 1892, a veteran of the Civil War, first mayor of Atwood, Kan , died in the State Hospital, Ingleside, Neb , November 5, aged 75

Lee C George, M D Tulane University, New Orleans, 1896, of Monroe, La , a member of the American Medical Association, local surgeon for the Queen and Crescent System, died in the Gulf Coast Health Resort, Biloxi, Miss , December 3, from nephritis, aged 43

John Richardson Hoffman, M.D Jefferson Medical College, 1868, a member of the Medical Association of the State of Alabama, surgeon in the Confederate service throughout the Civil War, died at his home near Athens, December 3, from senile debility, aged 82

Isaac N Cohen, M D Friedrich Wilhelm University, Berlin, Germany, 1872 a surgeon in the German Army until 1890, of La Crosse Wis , died in the La Crosse Hospital, December 1, from acute peritonitis, for which operation was performed without avail aged 62

Arthur MacCabe, M.D Baltimore University, 1897, Queens University, Kingston, Ont , 1903, a member of the American Medical Association, formerly chairman of the Board of Health of Gloucester, Mass , died at his home in that city, November 12, aged 45

William J Kennedy, M.D Minnesota College of Physicians and Surgeons, Minneapolis 1903, formerly local surgeon at Enderlin N Dak , for the Minneapolis, St Paul and Sault Ste Marie Railway, died at his home in Olga, N Dak , recently, aged 35

Daniel Stanislaus Harkins, M.D Harvard Medical School, 1888 a member of the Massachusetts Medical Society, for two terms a member of the Boston School Board and quarantine physician, died at his home in Boston, December 8, aged 48

Harry C Guillot, M.D Detroit College of Medicine, 1891 for five terms mayor of Pontiac, Mich formerly a member of the staff of Eastern Michigan State Hospital in that city, died at his home December 3, from valvular heart disease, aged 45

Simon S Wilcox (license, years of practice, Illinois, 1877), a veteran of the Civil War for half a century a practitioner of Hutton Township, Vermilion County, died in the Soldiers' Home Danville, Ill , November 27, from senile debility, aged 87

William D Humphrey, M D Northwestern University Medical School, Chicago, 1899 of Virginia, Ill , who was injured five weeks ago in a runaway accident, sustaining a fracture of the skull, died in a hospital in Jacksonville, December 5, aged 48

Robert A. Gunn, M.D University of Buffalo N Y., 1866, of New York City, died in Bellevue Hospital, December 7, from the effects of morphin, aged 68

William K. Flatt, M.D Hahnemann Medical College, Chicago, 1869 died at his home in St. Paul, Minn , December 5, from cerebral hemorrhage, aged 82.

Francis Duffy, M.D University of Virginia, Charlottesville, 1868, College of Physicians and Surgeons, New York City, 1875, a member of the Medical Society of the State of North Carolina, died at his home in Newbern, N C , November 5

J Hartridge Kennedy, M D Medical College of Georgia, Augusta, 1892, was found dead at his home in Lew, Ga , December 2, from the effects of chloroform, believed to have been self administered, with suicidal intent, aged about 43

John Thomas Jennings, M D University of Louisville, Ky , 1891, died at his home in Ramona, Okla , November 29, from the effects of a gunshot wound of the head, self inflicted, it is believed, with suicidal intent, while despondent, aged 40

Benjamin F Hamell, M D University of Pennsylvania, Philadelphia, 1863, of Oakland, Cal , was found dead in his sleeping car berth on an eastbound Southern Pacific train at Ogden, Utah, December 2, from heart disease, aged about 70

William H Haynes, M D Medical College of Ohio, Cincinnati, 1889, of Aurora, Ind , a member of the Indiana State Medical Association died at the home of his sister in Wilmington, Ind December 4, from pneumonia, aged 53

Alexander Bailey, M.D University of Louisville, Ky , 1881, for several years superintendent of the State Feeble Minded Institute, Frankfort, Ky , died at his home near Frankfort, November 24, from pneumonia, aged 62

Albert P Harrison, M.D College of Physicians and Surgeons, Kansas City, Kan , 1902, of Coldwater, Kan , a member of the Kansas Medical Society, died in the Wichita Hospital, November 21, from heart disease, aged 39

Henry Gastineau, M D Central College of Physicians and Surgeons, Indianapolis, 1895, of Howesville, Ind , at one time treasurer of Greene County, died at the home of his son in Howesville, December 3, aged 68

Joseph McCann, M.D Starling Medical College, Columbus, Ohio, 1854, died at his home in Delaware, Ohio, December 1, from cerebral hemorrhage, following a fall from a ladder, eleven days before, aged 88

Edward F Schwedler, M.D University of Leipzig, Germany, 1848, for many years a member of the visiting staff of the German Hospital, New York City, died at his home, December 7, from pneumonia, aged 90

Samuel J Tilden Ritter, M.D Eclectic Medical Institute, Cincinnati, 1897, a director of the Bethlehem (Pa) Trust Company, died at his home in Bethlehem, December 4, from pneumonia, aged 36

William M Cooley, M.D Hahnemann Medical College, Chicago, 1868 a pioneer practitioner and clergyman of Dickinson County, Kan , died at his home in Herington, December 3, aged about 78

William P Townsend (license, Texas, Fifth Judicial District Board 1891), a member of the State Medical Association of Texas was found dead in a well at his home in Mattinburg December 2

Monroe L Vansant, M.D Hahnemann Medical College, Philadelphia, 1857 a physician and dentist of Philadelphia died at his home, September 22, from senile debility, aged 90

David Alexander Kittle, M D, Washington University, St Louis, 1853, since 1865 a practitioner of Kansas City, Mo , died at his home, December 1, from senile debility, aged 92

Charles Billon Gratiot, M D Missouri Medical College, St Louis, 1849, one of the oldest practitioners of St Louis, died at his home, December 11, from senile debility, aged 84

Lemuel S Lawson, M D University of Maryland, Baltimore, 1867 for forty three years a practitioner of Dallastown, Pa , died at his home, December 5, from uremia, aged 75

Andrew James Boman, (license, Michigan, years of practice 1900) for nearly thirty years a practitioner of Alpena, died at his home in that city, November 30, aged 76

Russell H. Sparks, M D Medical College of Ohio, Cincinnati, 1871 of Stamping Ground, Ky , died recently at the home of his sister in Pleasureville, aged 80

William E Moon, M.D Keokuk (Iowa) Medical College 1892, died at his home in Traverse City, Mich , December 9, from carcinoma of the stomach, aged 49

William Minser, M.D Cincinnati College of Medicine and Surgery, 1882 formerly of Versailles, Ohio, died suddenly in Greenville, Ohio, December 1, aged 52

George Mays (license, Texas, 1907) a practitioner of Houston since 1869, died at the home of his daughter in that city December 2, aged 65

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

ADVANCED MEDICAL SCIENCE INSTITUTE, A NOTORIOUS QUACK CONCERN, RUN OUT OF KENTUCKY

About Sept 20 1912, a quack concern styling itself variously the "Advanced Medical Science Institute," "Radio Electric Company," "Witman Medical Company" and "Delish Etts Manufacturing Company," with an alleged capital stock for each of these concerns of from $25,000 to $2,000,000 and claiming to be a part of the State Land Company of Oklahoma, with branches in a dozen or more states, began operations in one of the principal office buildings in Louisville Flaming advertisements in the newspapers announced that it had expert diagnosticians and scientific apparatus too costly and accurate for the medical profession to possess or appreciate, and in a few days reported cures so numerous and miraculous as to attract a large clientele The State Board of Health put the machinery of the law in operation and its special agents, male and female, reported in a few days that X. W Witman, the head of the concern and its expert diagnostician, was not a physician, and that the only medical man in it was one who had failed as a practitioner and was employed in an attempt to legalize its practice at a salary of $15 a week The scientific apparatus—a fake worthy of the operators—consisted of a cheap fluoroscope Witman pretending to look through the body into a blind box, would declare that he saw handfuls of gall stones, and stomach, lung and kidney lesions, and thus found it easy to relieve the unfortunates of any surplus cash they had or could obtain

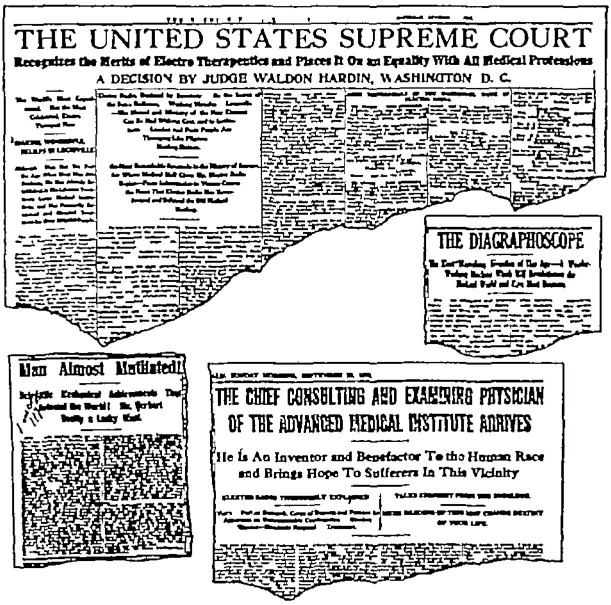
Twenty indictments were secured at the next sitting of the grand jury (most of them not for violations of the medical law, it should be observed) and warrants were taken out from day to day as evidence could be secured One woman, it is alleged, furnished $3,000 to finance the concern and its defense, able attorneys were employed by it, a virulent crusade was begun in the press against the State Board of Health, the State Medical Association and the American Medical Association, and women were employed in broad and systematic efforts to blackmail and intimidate leading members of the profession, especially those connected with the prosecution or summoned as witnesses All of this was of no avail The attorney of the board, to whom chief credit is due for the freedom of Kentucky from open quackery for the last twenty years, had prepared the cases with such care and ability that the woman in the concern who had been used in the efforts to discredit members of the profession, turned state's evidence

ADMIT GUILT

Nine of the indictments were against the Delish Etts Manufacturing Company, Dr George W Foreman, X. W Witman, W M Foreman and Frances Holst for failure to file a certificate One was against the Advanced Medical Science Institute and the persons named for unlawfully practicing medicine, and nine against the same institute and persons for failing to file a certificate The failure to file a certificate refers to the engaging in business under an assumed name as in the cases of the Delish Etts Manufacturing Company and the Advanced Medical Science Institute, without having filed a certificate giving the names, places and residences of all persons actually interested in and conducting the business, and the nature of the business There were eighteen counts of this sort The other two were for practicing medicine illegally On the eighteen charges, by agreement, Witman was fined $25 each and $50 each on the two latter, making, together with costs, nearly $700, which Witman paid Dr Foreman pleaded guilty to one charge of doing business under an assumed name, the Advanced Medical Science Institute, and a fine of $50 was imposed, which is included in the above sum Frances Holst filed a statement in court as to her connection with the business and agreed to cease having any future connection with such business The cases against her and W M Forman were dismissed Witman admitted that the business had been illegally conducted, that the offices would be immediately closed and that he would not in future engage in similar business in the state of Kentucky This is all a matter of record in the criminal courts of that state The concern closed its offices within an hour and notices were at once issued for Dr George W Foreman to appear before the State Board of Health at its next meeting to show cause why his certificate to practice medicine should not be revoked "for gross unprofessional and dishonorable conduct of a character likely to deceive and defraud the public" Foreman graduated from the Kentucky School of Medicine in 1902, his name being given as George Forman He was licensed in Kentucky in 1903 under the name of George W Foreman

NEWSPAPER RESPONSIBILITY

This, for the time being at least, ends the career of one of the crudest and most brazen examples of advertising quackery



THE UNITED STATES SUPREME COURT

Recognizes the Merits of Electro Therapeutics and Places It On an Equality With All Medical Professions

A DECISION BY JUDGE WALDON HARDIN, WASHINGTON D. C.

THE DIAGRAPHOSCOPE

Man Almost Mutilated!

THE CHIEF CONSULTING AND EXAMINING PHYSICIAN OF THE ADVANCED MEDICAL INSTITUTE ARRIVES

He Is An Inventor and Benefactor To the Human Race and Brings Hope To Sufferers In This Vicinity

Photographic reproduction (much reduced) of portions of some of the advertisements put out by the Advanced Medical Science Institute fraud

which the daily papers of Louisville aided and abetted by printing large reading notice advertisements with flaming headlines It is a matter of astonishment that in this day and age reputable newspapers should lend themselves to such gross forms of swindling In effect they make themselves partners in a crude confidence game in which their own patrons are not only swindled out of their money but are doubtless, many of them, irreparably harmed by the treatment, or by the lack of the proper treatment they require Many of the statements made in these advertisements are so extravagant and absurd as to be laughable and really should not deceive any layman of average intelligence Yet these quacks must have done a large business in Louisville, else they could not have paid for the extensive advertising space purchased by them in these newspapers

A few examples of statements from these advertisements are given below

The following appeared in the Louisville *Times* October 17

MAN ALMOST MUTILATED! SCIENTIFIC MECHANICAL ACHIEVEMENTS THAT ASTOUND THE WORLD! MR HERBERT BEATTY A LUCKY MAN!

After an automobile accident which all but killed him outright Mr Herbert Beatty s life was by means which has astounded the civilized world The following is what was done for Mr Beatty at the Advanced Medical Science Institution 708 Realty Building A glass eye an artificial nose a silver plate in his skull and a false lining in his stomach was inserted, and yet Mr Beatty lives and enjoys perfect health In answer to the question when interviewed by a reporter the doctor explained Almost anything can be done nowadays by electricity when in the hands of a scientist The lining of Mr Beatty s stomach was deposited there by a powerful current which is perfectly harmless and painless bismuth is used as that metal can be removed after a cure is effected as readily as when placed there by simply reversing the polarity of the current. When this lining is placed in a diseased stomach or bladder it coats the diseased mucous lining protecting the diseased parts from the matter which would constantly irritate the parts and prevent a cure without this protection This great discovery is a boon to those sufferers from stomach trouble and intestinal canal or any irritation of the kidneys caused by stricture or ulceration of any kind The multiple machine the only one in the U S of America was applied and one application dissolved that troublesome malady in less than three minutes time '

Equally interesting with the "multiple machine," described above, which cured a "stricture or ulceration" in three minutes, is the "Diagraphoscope" which is stated in the Louisville *Herald* of September 20 to be "The Most Marvelous Invention of This Age—A Wonder Working Machine Which Will Revolutionize the Medical World and Cure Most Diseases" In the absurd description of the "diagraphoscope" which is called 'the eighth wonder of the world," it is said that it is

> Doing more for diseases than an ocean of drugs or a forest of surgeons knives It gives a diagnosis that is absolutely true—not guess work This is accomplished by showing to the naked eye every organ in the patient s body By means of this phenomenal machine s powers one can see the heart in action the rise and fall of the diaphragm a spoonful of bismuth passing down the throat Any constriction is as visible as the light of day as are kidney stones or in fact any abnormal condition It will show gall stones so often believed to be cirrhosis of the liver You can see right past the appendix, often observing the kidney stones so often mistaken for appendicitis Any enlargement of the joints is immediately revealed and taking it all in all makes the formerly much vaunted *x*-ray look like a toy

In another reading notice in the Sunday *Herald* of Sept 22, 1912, it is announced in great headlines that the chief consulting and examining physician of the Advanced Medical Institute has arrived He is described as the "great scientist who has revolutionized the medical profession and startled science" with his electro radio The important announcement is made that he had brought his auto and had engaged beautiful apartments in the fashionable part of town But the most wonderful part of this advertisement is the description of the way in which they examine the patient in the Advanced Medical Science Institute It is as follows

> "The first thing we do with a patient who insists he has heart trouble is to take a drop of blood from his finger My celebrated bacteriologist examines that blood with his microscope which magnifies 4 000 times and separates every blood-corpuscle the red from the white We measure them count them watch the activity in life the color of them and their shape We then place the instrument imported from London under the patient s arm It tests the blood pressure through the heart The urine is analyzed by electricity The heart is looked at It can be seen pulsating as plainly as looking through an open window We look through the body to see if there are any abnormal conditions. That tells the story In nine cases out of ten we find the patient suffering from an effect and not the supposed cause"

The brazen assurance of these quacks is illustrated still further in an advertisement in one of the Louisville daily papers in which is quoted almost completely an article by a prominent surgeon in one of the popular magazines concerning medical ethics The surgeon's name is signed to the article and the article is used in an attempt to show why regular physicians are not worthy of confidence and that faith should be placed in the electro radio treatment of these quacks

MORE LYING

A still more flagrant example of the sheer nerve of these swindlers is found in a half page advertisement in the Louisville *Evening Post* Oct 12, 1912, in which it is said in headlines extending across the whole page that 'The United States Supreme Court Recognizes the Merits of Electrotherapeutics and Places It On an Equality with All Medical Professions A Decision by Judge Waldon Hardin, Washington, D C" Then it pretends to quote from and comment on the Collins decision by the United States Supreme Court It quotes Judge Hardin as having delivered himself of the following brilliantly expressed thought presumably from the Collins case "The allopathic doctors dug their own pits in the Collins case They never realized they had hold of a live wire until it was too late"

There is no Judge Waldon Hardin on the bench of the United States Supreme Court or in the district courts The Collins case was a case from Texas involving the reregistration of an osteopath who had a license under a previous medical act, and had nothing to do with electrotherapeutics The decision of the Supreme Court in that case sustained the new Texas law requiring the osteopath to register anew This serves only to illustrate the brazen effrontery of this quack concern which swindled the people of Louisville and vicinity probably out of many thousands of dollars in a few months The fine of about $700 amounted really only to a cheap license fee for these swindlers and they can afford to go somewhere else and do the same thing, which they probably will While the people of Louisville are to be congratulated on having been saved from further exploitation by this bald form of quackery through the activity of the profession and the state board of health when they once got in action, yet they have no reason to feel proud of their neighbors and friends, the proprietors of the newspapers who published the advertisements of these fake concerns and thus made possible their swindling operations

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Correspondence

Failure of Christian Scientists to Differentiate Dropsy and Pregnancy

To the Editor —Apropos of the wonderful cure (?) of Mabel Hite by the Christian Scientists as reported in The Journal (Nov 23, 1912, p 1896), I think that the report of a case in which I was called last month will be of interest I was engaged by a man to attend his wife during her confinement, which was expected to occur in a few weeks He said that they were Christian Scientists and gave me to understand that I would be called when labor began In answer to my questions, he stated that his wife was feeling well and that all of the functions were normal In due time I was hurriedly called, as the woman was said to be in labor When I arrived at the house I was greatly shocked to find the patient sitting up but in a dying condition On each side was a sister "healer" assuring her that she was just nervous, when in fact she was almost pulseless, lips blue, cold to knees and elbows and gasping for breath

As soon as I saw the conditions I had counsel called We found that the patient was not pregnant, but had general dropsy She died within two hours A post mortem was refused, so we are unable to say what caused the dropsy Oh, Religion, what fearful things are done in thy name!

B N Stevens, M D, Chillicothe, Mo

Danger of Infection from the Cigar Clipper

To the Editor —An incident which recently occurred forcibly called to mind the danger from the use of certain public articles, in this case the cigar clipper I was standing in a restaurant talking to a friend when a man came in who, as I knew, was afflicted with syphilis of rather recent inoculation He had mucous patches in his mouth at the time He bought a cigar and put it in his mouth He then remembered that he had forgotten to clip the end of the cigar, so he took the cigar from his mouth and clipped it in the clipper standing near The next man after him might easily contract the disease It is needless to say that I have never since cut off the end of a cigar in a public cigar clipper

Frank C Walch, M.D, Mukwonago, Wis

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

PROTECTION OF OTHER MEMBERS OF THE FAMILY FROM INFECTIOUS COLDS

To the Editor —I am interested in the problem of protecting other members of the family in cases of influenza and infectious colds It is often impossible to isolate the patient. I am having fairly good success with partial isolation together with gargles formaldehyd and eucalyptus inhalation etc I think it would be of interest not only to me but to many others who have the same problem if you would outline the best methods of protecting the well from the infection E P

ANSWER.—The problem of protecting persons against infectious colds is quite similar to that of protecting them against the other infectious diseases Isolation is a measure of chief importance It is very doubtful if the infections which give rise to the symptoms of a cold are spread to any extent by means of fomites The infecting agent appears to be the living patient, frequently a convalescent one, who still throws out from the mouth a fine spray laden with infectious germs This is more particularly the case in loud speaking, in which it has been shown that such germs can be carried to a distance of several feet When complete isolation is impracticable the patient can limit his infectiveness by the use of some form of sputum receiver and by special care not to soil with nasal or oral secretions his own hands or clothing, and not to come too close to other persons His dishes, table napkins and handkerchiefs might well be kept carefully separate so that no one else will use or handle them until time to wash them One need have little fear of the infectious matter that might possibly persist through a thorough washing, but boiling would be a sure disinfectant

Ordinary cleanliness on the part of the other members of the household, especially frequent washing of hands, will probably be a sufficient means of protection in place of any extensive means of disinfection An important measure in preventing the reception of such germs is to secure the healthy condition of the mucous membrane of the nose and pharynx The fact should be remembered that the nasal mucous membrane is affected by conditions in other organs, particularly the skin the digestive organs and the sexual apparatus The local treatment of the nasopharynx with antiseptics is probably of slight value, except when there is present some viscid secretion to be removed Too extensive spraying of the throat may even be prejudicial by removing a layer of protecting mucus and *leaving the mucous membrane perhaps more accessible to the* invasion of pathogenic germs

BLOOD TRANSFUSION—SALINE SOLUTION—ALYPIN—ARISTOL—BOVININE

To the Editor —1 What is the simplest practical method of determining whether a donor is suitable for blood transfusion? 2 What strength saline solution would you recommend for intravenous administration? 3 What is Alypin? What is its therapeutic value? 4 What is Aristol? 5 What is Bovinine? M Y D

ANSWER —1 The donor should be free from disease If sufficient time is allowable it would be well to perform the Wassermann test. It is preferable that the donor should be a blood relative, as the blood of strangers is sometimes hemolyzed by the blood of the recipient It might be well to determine beforehand whether the blood of the recipient exercises a hemolytic action on the blood of the proposed donor

2 Sodium chlorid, 0 9 per cent., gives a solution which is isotonic with the blood plasma and hyperosmotic in sodium chlorid A better solution would be one containing 0 6 per cent sodium chlorid and 0 3 per cent other salts, especially sodium bicarbonate A solution containing 0 7 per cent sodium chlorid is usually near enough to the molecular concentration of the blood plasma for ordinary use

3 See New and Nonofficial Remedies, 1912, p 27

4 Aristol is a trade name for thymol iodid See New and Nonofficial Remedies, 1912, p 243

5 Bovinine is a nostrum claimed to be a preparation from beef blood. It was investigated by the Council on Pharmacy and Chemistry and the results were published in THE JOURNAL, Nov 20, 1909, p 1756 The report has also been published in the "Reports of the Council on Pharmacy and Chemistry" for 1909, pp 137 and 142 and in the 'Propaganda for Reform in Proprietary Medicines," p 28. Bovinine was rejected by the Council

NEOSALVARSAN IN RHEUMATISM AND ANEMIA

To the Editor —Please advise me with reference to the use of neosalvarsan in the treatment of rheumatism and anemia
JAMES ROSS M D., Moline Ill

ANSWER —Salvarsan has been used with apparently good results in some cases of pernicious anemia A similar use of neosalvarsan is reasonable, but we do not know that it has been applied in this way

DENTAL ANESTHETICS

To the Editor —What is most effective to prevent pain in the extraction of teeth? S T

ANSWER —The sensibility of the gums can be reduced by rubbing them with a solution of cocain or one of the many proprietary cocain substitutes, so that the prick of the hypodermic needle will not give pain In some cases a merely psychic influence may be sufficient to secure an almost painless extraction Rubbing a remedy on the gums might secure this psychic effect in a considerable number of cases

Local anesthetics and obtundents are agents to produce insensibility to pain in a circumscribed area of tissue They are used to act at once on nerve endings in a given locality especially in the extraction of teeth Local anesthetics are divided into (A) soluble local anesthetics, (B) insoluble local anesthetics and (C) refrigerant local anesthetics

A The best known soluble local anesthetic is cocain hydrochlorid According to Preyer's conception, local anesthesia is produced as follows Cocain possesses a distinct affinity for the living protoplasm of the nerve cell, it enters with it into a labile union, thus producing local anesthesia, which lasts until its temporary union is broken up by releasing the chemical—not as the original cocain, however, but as *an inert compound of a simpler structure* In other words, the living tissues rid themselves of the poison in some unknown manner

Some of the formulas for local anesthetic solutions of cocain are

℞	gm or c.c.			
Cocainae hydrochloridi		32		gr v
Sodii chloridi		25	or	gr iv
Aquae destillatae	30			fl ℥j

M Sig Cocain injection for dental purposes To each cubic centimeter add 1 drop of epinephrin solution when used (Prinz)

Following are two formulas for local obtundents

℞	gm or c c.		
Cocainae hydrochloridi	1		gr xv
Phenolis liquefacti	4	or	ʒj

M Sig Apply the heated solution to hypersensitive dentin (Jenkins)

℞.	gm or c c.			
Cocain (alkaloid)	1	3		gr xx
Chloroform	8		or	fl ʒij
Ether	30			fl ℥j

M Sig Apply to the cavity on a small pledget of cotton and evaporate to dryness (Buckley)

Novocain is one of several cocain substitutes (see New and Nonofficial Remedies, 1912, p 152) It is said to have the same action on the peripheral nerves as cocain, with an equal amount of anesthetic potency Applied locally, it has no side or after effects, and is non irritating to the soft tissues A formula commonly used is

℞	gm or c.c			
Novocain		6		gr x
Sodii chloridi		25	or	gr iv
Aquae destillatae	30			fl ℥j

M Sig To each cubic centimeter add 1 drop of epinephrin solution when used (Prinz)

B Among insoluble local anesthetics are comprised a number of *synthetic compounds introduced within recent* years which possess marked analgesic power when applied in substance on painful mucous membranes or abraded surfaces Anesthesin, Orthoform New and Propaesin are illustrations The following anesthetic mixtures may be used

℞		gm		
Anesthesin				
Corn starch	āā	4	or	āā ʒj

M Sig Dusting pow

℞	gm		
Orthoform		or	ʒj
Lanolin			℥j

M f unguent

C Refrigerant local anesthetics are local applications which abstract blood from the tissues They lower the temperature, diminish sensation, and reduce the volume of the parts to which they are applied When continuously applied in due time they produce definite anesthesia These freezing agents are restricted to small areas especially around the roots or root of the tooth to be removed. Ether and ethyl chlorid are used for this purpose

LITERATURE ON INDURATIVE HEADACHE

To the Editor —Please give me the literature on indurative headache (*musculäre Kopfschmerz* or *cephalée musculaire*)

A M., ——— Texas

ANSWER —Following are some of the articles on the subject

Reidel Der Kopfschmerz und seine physikalische Behandlung *Berl Klin Wchnschr* 1907, xliv 338

Kleen Handbook of Massage P Blakiston s Son & Co Philadelphia 1892

Edinger In Diseases of the Nervous System translated from Die Deutsche Klinik, Appleton & Co New York 1908

Yawger, N S Indurative Headache THE JOURNAL, April 24 1909 p 1316

Rose F Headache from Nodules in the Muscles *Semaine méd* Paris March 29 1911 xxxi, No 13 abstr in THE JOURNAL May 6 1911 p 1365

Norström G Chronic Headache and Its Treatment by Massage A. R. Elliott Publishing Company New York 1905

Auerbach S Zum Wesen des sog Knötchen oder Schwielen kopfschmerzes *Deutsch Ztschr f Nervenheilk* 1911 xlii 399

Auerbach, S Der Knötchen oder Schwielenkopfschmerz und seine Behandlung *Samml Klin Vortr* (Volkmann) 1903 No 361

Müller A Der musculäre Kopfschmerz sein Wesen und seine Behandlung *Deutsch Ztschr f Nervenheilk* 1910 xl 325

Müller A Der muskuläre Kopfschmerz Leipzig 1911

Müller, A. Der Untersuchungsbefund am rheumatisch erkrankten Muskel *Ztschr f Klin Med*, lxxiv Nos. 1 and 2.

Auerbach S Der Kopschmerz, seine verschiedenen Formen, ihr Wesen ihre Erkennung und Behandlung Julius Springer, Berlin 1912

ORYZANIN

To the Editor —Somewhere recently I saw an article referring to an article by a Japanese investigator on the active principle in rice polishings which he had named Oryzanin I thought it was in an editorial in THE JOURNAL but cannot find it Please refer me to the article if you did publish it and also to the original article

W L. BEECHER M D Chicago

ANSWER —The editorial was published in THE JOURNAL, Sept 14, 1912, page 883 The original article, Ueber Oryzanin, ein Bestandtheil der Reiskleie und seine physiologische Bedeutung, was published by V Suzuki, T Shimamura and S Odake, in the *Biochemische Zeitschrift*, 1912, xliii, 89

A REQUEST FOR MATERIAL ON LEUKOCYTIC INCLUSIONS IN SCARLATINAL BLOOD

To the Editor —In order to arrive at a definite conclusion as soon as possible regarding the diagnostic value of the leukocytic inclusions which have been described in the blood of scarlatinal cases I would deem it a personal favor if physicians having such patients would send me a few blood smears on slides or cover glasses from every case observed within the next few months together with a note stating the day of the disease the existence of eruption run of temperature and apparent severity of the case

CHARLES E. SIMON Baltimore
1302 Madison Avenue

CONDENSED ANSWERS

[Summarized here because of general interest or because the questions are asked by other correspondents]

RUSSO TYPHOID REACTION

Dr J W Crenshaw, Cadiz, Ky Described in THE JOURNAL, Aug 10, 1912, page 465

FOLIN S ESTIMATION OF CONSTITUENTS OF URINE

Dr A L. Green, Milford, Ill See text books on clinical diagnosis by Simon, Wood or Webster

RHEUMATISM PHYLACOGEN

Dr W W Pretts, Platteville, Wis Discussed in THE JOURNAL, Aug 10, 1912, page 464

PREVENTIVE OF VENEREAL INFECTION

Dr O A. Grantham, Johnstown, Colo The formula and the method used by some army surgeons are given in an original article in THE JOURNAL, April 15, 1911, p 1098 See also an abstract, Dec. 24, 1910, page 2257

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST GRADUATE WORK CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

A NATIONAL DEPARTMENT OF HEALTH

Last week we commented on the interest which is being taken by the lay press with reference to the national Department of Health and the changed views in regard to it Another evidence is an article by Dr John A. Wyeth of New York entitled "Why a National Department of Health is Needed," which appeared in the Sunday edition of a group of daily newspapers Following are a few paragraphs from Dr Wyeth's article

"There is, in the President's cabinet, a Secretary of Agriculture, one of whose duties is to look after the welfare of our domestic animals, but there is no voice in the cabinet to speak out for the welfare of the women and children—and surely no one will gainsay that these are more valuable than our hogs, horses and cows

"I am not in favor of the Owen bill, for the reason that it is a compromise The Department of Health should not be a secondary bureau in any other department—nothing but a special department with a Secretary of Health, as a member of the cabinet, should be accepted by the American people and by that powerful organization, the American Medical Association, which, representing 130,000 busy practitioners of medicine in the United States, is working earnestly and effectively in the campaign of education to accomplish this end.

'The question of states' rights is not involved—without interference in any way with the prerogatives of the various state boards, these can be employed in successful cooperation for the general welfare No single state, or group of states, should be made to bear alone the expense of fighting an epidemic—it is not fair to the state, or to its neighbors who are threatened Epidemics do not respect interstate boundary lines, and a stream vilely polluted in one community may flow on and on through a dozen other states, carrying its poison to the helpless people who are compelled to use its waters

"The world was never more under obligations to the self sacrificing work of the medical profession than now Its members are giving not only their time and energy and means, but their lives in this warfare against disease and death The young, the brilliant Ricketts, who discovered the cause and the cure of that fatal endemic, the 'Rocky Mountain fever,' died in Mexico while studying the cause of typhus, himself a victim to this malady Lazear and Carroll laid down their lives after being bitten by yellow fever mosquitoes in testing their then theory—now no longer a theory but a fact, which their death proved—that this dread epidemic disease was carried from man to man by this insect With the knowledge thus gained, Dr Gorgas banished yellow fever from Havana after a century of its presence there Think of what all this means to life, happiness and to commercial prosperity!

Turn to another fatal disease, typhoid fever It is no longer dreaded In the Spanish American war our men died like sheep with 'the rot' Twelve years later an equal number of troops, subjected to the identical conditions of climate and location and time in camp, did not lose a single life, as compared to the thousands that died and were ill in 1898 and 1899 in Florida and at the Chickamauga camp Medical science had won another great victory and typhoid fever was ranked with the preventable diseases

'I could extend this list for many columns, but these should suffice to show what progress has been made and is being made, and what can be done to save life and assure health and happiness, provided always that proper authority and power are given to enforce obedience to the requisitions of scientific sanitation Colonel Gorgas could never have driven yellow fever from Havana without the discipline and power which General Wood lent him He failed at Panama at first, because red tape hampered him No sooner had these restrictions been removed in answer to the powerful protest of the American Medical Association than the death rate began to go down and down until within a year the Canal Zone was fever free and had become the white man's home

What is true of yellow fever and typhoid fever and malarial disease is true of tuberculosis and all the other wide spread diseases. It is up to the American people to secure the maximum of health and usefulness for themselves by cooperating with the medical profession in its humane work It can best be done by a national Department of Health and a Secretary of Health in the President s cabinet "

A RELIGIOUS JOURNAL ON PUBLIC HEALTH

An interesting editorial comment, as showing the growing interest of religious publications in health matters, appears in a recent issue of the *Congregationalist* Under the heading of 'The Public and the Doctors," the editor says

"The private and individual activity of public spirited physicians in matters of the common weal has always been a source of strength to the community But the time has come, we think, for a more corporate activity and sense of duty Take the marriage question, for example The public would pay far more attention to the voice of associated doctors and surgeons than they do the words of the clergy Some of our advanced ministers are claiming the assistance of physicians in determining whether they have a right to bind men and women together in wedded life It would be well if the physicians could meet this demand by formulating a basis for certificates of fitness for marriage resting on something more than the individual doctor's opinion

"There are great reforms that bear directly on the prevention of disease and the lowering of the health standard in certain trades and employment of the physically unfit The question of vocational poisonings, such as the lead poisoning of the painters' and potters' trades and the phosphorus poisoning of the match trade, is one in which we need the voice of that profession which deals with health We have a right to claim its corporate leadership toward reform The lowering of the stamina of the race by child labor, by overwork in bad surroundings and the employment of women in unfit trades—are not these matters which concern a medical congress as intimately as the grafting of bone on bone, the replacement of tissue and the clean and healing use of the knife?

"In a word, we hope for the time when the preventive and prophetic work of the medical profession will be at least as large as its effort for recovering lost ground of health If the doctors will safeguard our health and keep us from illness as individuals and as a people, we can afford to subsidize them From the point of view of their own pride and satisfaction, we think it would be better to keep people well rather than to cure them Perhaps, when they have perfected their organization for the public responsibilities that offer, they will petition us to pay them on the Chinese plan of a salary so long as we are well, and a ceasing of pay while we are ill and they are working at our cure "

Society Proceedings

COMING MEETINGS

American Association of Anatomists Cleveland Dec 31 Jan 2.
American Physiological Society Cleveland, Dec. 26-28

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held Oct 23 1912

The President, DR L JAY HAMMOND, in the Chair

Occurrence of Bence-Jones Protein in Conditions Other Than Those of Characteristic Myeloma

DRS C G GUTHRIE and THOMAS R BOGGS, Baltimore Although the great majority of cases of multiple myeloma show Bence Jones proteinuria, carefully studied instances of the disease have been reported without the excretion of this unusual body in the urine In others it has been absent either early or late in the disease Clearly established Bence Jones proteinuria has occurred in diseases other than multiple myeloma, among others, leukemia, injury, and in one case of metastatic carcinoma of the bones In our case the original tumor was in the breast with wide spread metastatic involvement of the bony skeleton The condition was diagnosed clinically *intra vitam* and confirmed by the examination of a portion of the femur after death The Bence Jones protein was present in the urine during the period of examination, and its identity was clearly established by chemical tests From this observation and from a study of the literature, we conclude that Bence Jones proteinuria bears neither a constant nor a specific relation to myelomatosis, but may be associated with any one of a variety of disease processes involving the bone marrow

DISCUSSION

DR ALEXANDER RANDALL That the mere calling of attention to this matter in Baltimore brought to notice four cases in a year is suggestive that all cases of obscure bone marrow disease, anemia and leukemia should be examined for this body From Dr Boggs' deductions I think we can say that with the finding of this body in the urine we have a case of bone marrow disease The substance has been found in a variety of conditions and in many parts of the body, and it is to be regarded as an entity I should like to ask Dr Boggs whether the bone marrow has any characteristic appearance When we realize that the kidneys have to do with all the metabolic processes of the body, and when we have a test that will tell us the function of the kidney, we shall have a wide sphere of activity in working out these processes

DR. JAMES M ANDERS It is an interesting fact that, following the discovery of this protein body in the urine by Bence Jones in 1847, the subject received scanty attention for twenty two years Other observations were reported in 1864 and in 1870. In 1902, Dr Napoleon Boston and I reported three cases, and at that time made a review of the literature A number of cases were found coming under the head of Dr Boggs' paper We also found two cases recorded in literature in which the body was associated with the clinical picture of pernicious anemia There was a total of thirty three cases due to all causes While there are many conditions in which this body may be found in the urine, yet in any case in which we have clinical symptoms referable to multiple myelomas, the presence of this body in the urine should be regarded as a diagnostic feature On the other hand, we cannot assume to day that the presence of this protein body in the urine, in any case in which there are no symptoms pointing to multiple myelomas, has any diagnostic significance I believe with Dr Boggs that we are justified in assuming that protein urine is absolutely diagnostic of disease of the marrow of the bones, and perhaps we can go no further That there are associated with most of the cases well marked and progressive phenomena, as asserted by a number of writers, does not seem to have been true of the cases of Dr Boggs or of Dr Boston's and mine With Dr Boggs, I believe that routine examinations of the urine would reveal not only the protein body, but also other rare morphologic elements, more frequently than at the present time are observed

DR G J SAXON The discovery of the Bence Jones protein in 1847 and the failure to attach any clinical significance to it until 1889, when Kahler and Huppert reported a case of multiple myeloma from clinical and chemical aspects, respectively, is a sad illustration of the degree of enthusiasm which often greets the efforts of the laboratory worker Moreover, not until 1903 was any systematic effort made to collect the cases exhibiting this protein This was done by Anders and Boston Dr Boggs' advice to suspect the presence of this body in bone conditions should be kept in mind Two years ago I examined the urine of a patient having carcinomatous metastases of the ribs, vertebrae and both femurs from a primary involvement of the mammary gland, and while I did not find it, I am not discouraged at not having done so I might mention certain differentiating features of this substance Unlike heteroproteoses, it is soluble in water Unlike other proteoses it is controvertible into metaproteins, is coagulated at low temperatures, yields protoproteose on gastric digestion and is not acted on by erepsin, unlike all soluble proteoses, it does not dialyze through parchment paper

DR. THOMAS R BOGGS Answering Dr Randall I will say that there is confusion in the description of the characteristic multiple myel [illegible] ect what is found in this type of tumor, [illegible] th this protein body, is a loosely arranged sarcomatous tissue of stroma cells which contains also more or less evidence of abnormal growth of the elements of the blood, that is, the ancestral types of leukocytes and red cells.

The inquiry concerning the normal kidney and the excretion of this body touches one of the most interesting physiologic questions, which is, however, too large to be entered into in detail. Why a kidney will permit the passage of this body with all the characteristics of a heavy protein molecule, and hold back the albumin and globulin of the blood is interesting but cannot at present be definitely explained. The relation of nephritis to this particular substance is not settled, but it is significant that large proportions of the cases coming to autopsy have not shown any characteristic nephritis. In our cases we are dealing with something different from the ordinary associations of the disease, that is, a different kind of tumor process, and the urine of our patient had not only this peculiar protein substance, but the serum albumin as well. We did not have an opportunity to study the kidneys. I believe that they would have shown the pathology of nephritis. Dr. Anders asked about the blood count. The leukocyte count was 9,000, with only a mild grade of anemia.

Gastric Dyspepsia Due to Intestinal Diseases, and Intestinal Indigestion of Gastric Origin

Dr. Thomas R. Brown, Baltimore: I studied a series of cases of achylia gastrica with symptoms entirely intestinal, notably, diarrhea, and a series of cases of duodenal ulcer, and eighteen cases of chronic appendicitis, in each of which groups the symptoms were entirely gastric. It is of great importance to examine the gastric contents after the test meal in chronic intestinal cases, in considering the possibility of duodenal ulcer, and to examine gastric contents and stool carefully in cases regarded as gastric dyspepsia, and also in such cases to make a careful examination of the blood and careful temperature observations to determine if the basis of the condition is not some inflammatory process in the region of the appendix.

DISCUSSION

Dr. Alfred Stengel: Just as cases of achylia gastrica often give rise to intestinal symptoms, I have found that gastric ptosis sometimes causes periodic attacks of diarrhea similar to those which occur in achylia gastrica and are relieved in some cases by a proper measure of support, by a reduction of irritation which takes place in these cases of marked gastric ptosis. Many cases of gastritis are due not to the condition of the stomach but to the condition of the colon; these are benefited by treatment directed to the intestinal tract rather than to the stomach. Cases in which it has been shown that there is no gastric or duodenal ulcer demonstrate the fact that the hunger pain has not the absolute importance attributed to it. The pointing out of this important symptom is a distinct advance in diagnosis which has been given to us by the surgeons, but it is not so diagnostic as maintained by Moynihan and many other surgeons following him.

Dr. William E. Robertson: Achylia gastrica is one of the few gastric diseases that give striking and positive laboratory findings. The difference between benign achylia and the achylia of gastric carcinoma occurred to me some years ago and in thinking over sections of carcinoma that I have seen I was struck by the numbers of polynuclear cells found about the periphery of the growth. This led me to believe that we might find them in the gastric contents and afterward, after lifting a test meal and washing out the stomach, I found pus cells even where there was no ulceration of the growth. I had an opportunity of proving this five years ago in an operation on a woman. There was a small non-ulcerative growth on the lesser curvature near the anterior wall. This was sectioned and great numbers of polynuclear leukocytes were found in the periphery. Partial gastrectomy was done and the woman is still living.

Diagnosis and Treatment of Obscure Cases of Pyelitis and Hydronephrosis

Dr. Guy L. Hunner, Baltimore: Many cases are overlooked and recover spontaneously. From this fact we may infer that the treatment should usually begin along medical and hygienic lines. Many cases are not diagnosed, and the patients continue in ill health. Too often the physician fails to examine a catheterized specimen of urine or fails to attribute sufficient importance to the finding of bacteria and leukocytes in such specimens. A marked infection of the kidney pelvis may be present without albuminuria and without pyuria. On the other hand, a marked pyuria may exist for years without apparent injury to the patient's health. Many cases are diagnosed and treated as some other disease, particularly as typhoid fever and malaria. Certain cases of pyelitis are diagnosed and treated as such when the pyelitis is secondary to appendicitis. Pyelitis secondary to ureter stone and particularly cases secondary to ureter stricture are sometimes treated as pyelitis without attention to the cause. Kidney pain may be due to hydronephrosis in cases with normal urine, the hydronephrosis being due to ureter stone or stricture. The literature ascribes a congenital origin for too many of these cases. Gonorrheal periureteritis is probably the cause of a few, and the former presence of a stone undoubtedly accounts for some cases of stricture. Some cases of stone and many cases of ureter stricture may be traced back to infections elsewhere in the body, as in the tonsils.

After the failure of medical and hygienic measures I would recommend the semisurgical methods of pelvic lavage for the pyelitis cases and of dilatation of the ureter for most of the ureter stricture cases and for some cases of ureter stone. All of my cases of colon bacillus infection of the kidney pelvis have been cured by lavage with silver nitrate solution. I use a 1:500 solution of silver nitrate without appreciable ill effects. I am convinced that the silver nitrate solutions are not efficient in the cases of *Staphylococcus aureus* infections. For these I am now using a solution of formaldehyd in 1:2,000 strength, using the commercial formaldehyd as the standard. Many patients do not break down the hexamethylenamin preparations sufficiently to cause antiseptic quantities of formaldehyd in the urine. For dilating ureter strictures I prepare a renal catheter with different sized bulbs of wax placed about 5 cm. back of the tip of the catheter. These bulbs are eventually made as large as 5 mm. diameter if the stricture shows a tendency to contract.

DISCUSSION

Dr. Norman B. Gwyn: Once the suspicion of pyelitis has arisen we should at once start vigorous medical treatment, and move the patient to some place where the ureters can be catheterized carefully. While catheterization is being done, the other essential feature of diagnosis should be carried out. Skiagrams of the distended pelvis of the kidney should be taken. A vaccine can be prepared from the urine and a careful bacteriologic culture made, and if we suspect tuberculosis an inoculation can be done.

Dr. Damon Pfieffer: Medical measures, in the majority of cases, are more or less futile. This is supported by a great number of the cases which Dr. Hunner has cited to-night. I believe that free drainage is the essential cause of the recovery of most of these cases. The question of diagnosis is of supreme importance.

Hygiene, Business and Government.—That health is the basis of all wealth, power and happiness is plain to any one. That business and government have for so long neglected to place hygiene in the front of all practical agencies for good, simply declares that those in charge of business and government have not yet risen to a full understanding of the situation they are trying to control. John Fiske remarked, "It takes a thousand years to raise the human family a single notch." In view of the tardiness of business men and those in control of government to grasp the business and governmental importance of hygiene it would seem that Fiske much underestimates the time. Münsterburg said, "Hygiene can prevent more crime than any law." Disraeli, the practical statesman and empire builder, said, "The care of the public health is the first duty of the statesman."—J. N. Hurty in *Am. Jour. Public Health*.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery January 14 Chairman Dr W H Sanders

Arizona Phoenix January 6 7 Sec., Dr John Wix Thomas

Colorado State House Denver January 7 Sec Dr David A Strickler 612 Empire Building

District of Columbia Washington, January 14 Sec. Dr George C Ober 125 B Street S E

Illinois Coliseum Annex, Chicago January 22 24 Sec., Dr James A Egan Springfield

Indiana Room 57 State House Indianapolis January 14 16 Sec Dr W T Gott State House

Minnesota Pathological Institute University of Minnesota Minneapolis January 7 Sec., Dr Thomas S McDavitt Lowry Building St Paul

New Mexico Santa Fé January 13 Sec. Dr W E. Kaser East Las Vegas

New York January 28 31 Chief of Examinations Division Mr Harlan H Horner Department of Education Albany

North Dakota Grand Forks January 7 Sec. Dr G M Williamson

Oklahoma Oklahoma City January 14 Sec Dr John W Duke Guthrie

Oregon Portland January 7 Sec. Dr E B McDaniel 702 Electric Building

Rhode Island State House Providence January 2 Sec Dr Gardner T Swarts State House

South Dakota Watertown January 8 Sec. Dr L G Hill

Utah Salt Lake City January 6 7 Sec Dr G F Harding 810 Templeton Building

Vermont Montpelier January 14 16 Sec. Dr W Scott Nay Underhill

Washington Spokane January 7 12 Sec Dr F P Witter Traders Block

Wisconsin Milwaukee January 7 9 Sec Dr John M Beffel 3200 Clybourn Street.

A MEDICAL COLLEGE IN VENEZUELA

Since the last publication of the list of foreign medical schools, the Council on Medical Education has received word from two different sources, regarding the medical school located at Caracas, Venezuela One of the accounts is in the article on "Medical Education in South America" by Dr Jacob Frank which appears in this issue The following is the account received from Dr Rawson J Pickard, of the Colon Hospital, Canal Zone

"The Universidad Central de Venezuela is one of the oldest universities of the western hemisphere—that at Lima, Peru, is the oldest—but the medical school was not organized until 1800 by Dr Vargas, the 'Father of Medicine in Venezuela,' to whom a statue is erected in the Plaza Vargas in La Guayra, his birthplace, and another in the patio in the university building in Caracas, about which are the medical lecture rooms

"The course takes five years, the first two spent on the fundamental sciences, the second two on anatomy, bacteriology, pathology and clinics, leading to the degree of 'Bachiller' The last two years of the course are spent as extern and intern in the Hospital Vargas, services being chosen by competitive examination The hospital, reached by a trolley line, is on a foothill of the wooded mountain chain which lies between Caracas and the Caribbean Sea The wards are in pavilions at right angles behind the offices and dispensary forming the facade Flower gardens lie between, the windows scarcely ever need be shut, and convalescents can look out from the veranda connecting the pavilions over the red roofed city to the mountains that hem in the green valley of the Guayre

"The laboratories are well equipped The director, Dr Henriquez, demonstrated *Spirochæta pertenuis* from some cases of yaws in the wards There is a plague laboratory, with a glass cabinet containing rubber sleeves for dissections, etc In the museum is much material, especially for the study of tropical pathology The hospital is of 350 beds, charity, with about 3,400 yearly admissions These, as well as the dispensary clinics, draw from the country for considerable distances, besides from the 80,000 population of Caracas Necropsies are optional Nursing is done under the direction of French nuns, it is not at all of American standard.

"The chief surgeon, Dr Acosta Ortiz, invited me to see a hysterectomy, done with a rapid technic and neatness Several things were at variance with American custom Instead of a laparotomy sheet and many towels the field of operation was narrowly bordered by gauze The instruments were kept in a metal dish and sterilized by burning alcohol on them Gloves were not used, owing to a prohibitive tariff

"Fifteen or twenty students who were crowded about the operating table courteously made room for me next the operator, pressing so close that I momentarily expected to be touched by him There was a 'new' woman present, a senior, certainly a great rarity in Spanish America She spoke English and intended to take the year of foreign study, which adds so to prestige in New York.

"Spinal anesthesia was used here commonly long before Jonnesco's tour through the States The Spanish are almost too ready to try the new Statistics from tropical writers, however, are quite favorable to this anesthesia, and it is used freely Several articles appeared in *El Tiempo*, a daily, by Dr Yanes, explaining the use of stovain, and the simplicity of carrying this anesthetic which enables one to be operator and anesthetist He used the spinal fluid withdrawn as the solvent in several minor operations which I saw, 'to obtain an isotonic solvent'

"Text books were chiefly in French, with some in English and German, on account of the lack of good authors in Spanish The similarity of the language to Spanish and the lucidity and simplicity, especially of medical French, give that language the preference They read, translated into Spanish, with the speed of their own language, besides, languages are not taught here as mental exercises merely

The medical students publish a small monthly review, *Revista de la Sociedad Vargas de Estudiantes de Medicina* Several presented me by Dr Ascanio Rodríguez contained articles by him on 'Las Pascuas Azules,' a morning glory, as a delicate indicator Other articles were on bronchitis in cattle caused by *Strongylus micrurus*, by Señor Rángel, and there were book reviews There was a marked tendency to philosophical discussion and to oratory

"The university building is of Gothic design, resembling, in plaster, some of the buildings of the University of Chicago and somewhat incongruous beside the wide tree lined boulevard, in which trolley cars ran past long burro trains Besides writing a thesis, graduates deliver an oration in an imposing room, the *paraninfo*, gorgeous with red velvet hangings Here in the presence of classmates, faculty and friends, he reads into life the ideals that in Spanish America are all the nobler for the sordid contrast to the practical life without Good luck to them Their lives, efforts and brilliant intellects are terribly wasted by struggling with the uncertainties of their social fabric"

Louisiana November Report

Dr A B Brown, secretary of the Louisiana State Board of Medical Examiners, reports the written examination held at New Orleans, Nov 4 6, 1912 The number of subjects examined in was 10, total number of questions asked, 100, percentage required to pass, 75 The total number of candidates examined was 49 of whom 33 passed and 16 failed One candidate was licensed through reciprocity The following colleges were represented

PASSED

College	Year Grad	Per Cent
University of Alabama	(1912)	88 1
University of Arkansas	(1895)	75
American Medical Missionary College	(1900)	80 7
University of Louisville	(1908) (1909) (1910) (1912)	76 1 75 8 78 88 2.
Tulane University of Louisiana	(1909) (1912)	84 2 78 5 80 6 84 1 84 2 84 5 85.8 86 2 87 87 3 88 1 89 1 89 4 90 1 91 1 92 2 92 6
Woman's Medical College of Pennsylvania	(1912)	88 2
Meharry Medical College	(1912)	75 9 81 8
Memphis Hospital Medical College	(1912)	84 4
Vanderbilt University	(1912)	84 2 80 4
University of Nashville	(1904)	*68 2
University of Texas	(1911)	87 2
University of Virginia	(1907)	85 1

FAILED

University of Arkansas	(1912)	60 1
University	(1912)	68 9 74 4

Memphis Hospital Medical College	(1908) 52 4 62 5, (1910) 73 1 (1911) 66 7 (1912) 32 51 9, 64 6 66 6 66 9	
College of Physicians and Surgeons Memphis	(1911)	49 6
University of Tennessee	(1912)	55 7, 74 6
Fort Worth School of Medicine	(1911)	65 9

* Allowed 8 per cent for years of practice

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
University Medical College, Kansas City	(1896)	Missouri

ANATOMY

1 Name the muscles that move the eyeball give their nerve supply 2 Give origin course and distribution of right recurrent laryngeal nerve 3 Give relations of brachial artery and name its branches 4 Name arteries which supply the thyroid gland 5 What are the two kinds of bone tissue and where is each found? 6 What muscles connect the scapula with the trunk? 7 What tends to prevent anterior displacement of the elbow joint? 8 Describe briefly the circle of Willis 9 Name muscles of gluteal region and give their origin and insertion 10 Describe the radius and its muscular attachments

CHEMISTRY

1 Define atomic weight (b) molecular weight (c) explain the terms reaction and reagent 2. What elements belong to the halogen group and why are they so called? 3 What is starch (b) properties (c) by what test can it be recognized? 4 Explain the phenomenon of respiration from a chemical standpoint. 5 What is the specific gravity of healthy urine? (b) How is the total amount of solids approximately estimated from the specific gravity? 6 Describe a test by which urea may be determined quantitatively in the urine 7 What is the chemical antidote for corrosive sublimate (b) sulphuric acid (c) caustic potash? 8 *What are enzymes? (b) Name the proteid hydrolyzing and starch hydrolyzing enzymes.* 9 Name the several tests for sugar in the urine and state the one you consider the most reliable and why 10 Give a chemical test for blood

PATHOLOGY

1 What is the difference between (a) anemic infarct and (b) hemorrhagic infarct? 2 Differentiate pathologically between (a) lobar pneumonia and (b) lobular pneumonia, as seen under the microscope 3 Describe the microscopic changes occurring in the kidney in acute diffuse nephritis 4 Describe the mode of action of the phagocytes 5 What are the characters of tumors in general? 6 Describe the healing of a compound fracture of a long bone 7 What part of the spine is affected by Pott s disease? Describe the pathologic changes taking place in the bone in Pott s disease 8 What pathologic changes occur in acute suppurative arthritis (metastatic, not traumatic)? 9 Describe the tubercle bacillus and *give a method for determining its presence in sputum* 10 What is an autogenous vaccine ? On what principle or principles is vaccine therapy based?

PHYSIOLOGY

1 Define anabolism and give examples of anabolic changes 2 What are the functions respectively of (a) the mouth (b) the stomach (c) the small intestines (d) the large intestines in the alimentary process of absorption? 3 Describe briefly the physical and morphologic characters of the leukocytes (white blood-corpuscles) 4 What is a polynuclear leukocytosis and what is its physiologic and pathologic significance? 5 State briefly the causes of the first and second sounds of the normal heart 6 What is the distinction between secretion and excretion? Give examples of each 7 What are the constituents of sweat? 8 What are the constituents of the intestinal juice and what is their action in digestion? 9 What are the functions of the spinal cord? 10 Give the distribution and the function of the glossopharyngeal nerve

THERAPEUTICS

1 What are the therapeutic uses of iodin and the iodids, and how are they administered? 2 When and how should iron be administered? 3 For what medicinal purposes are mercuric chlorid and mercurous chlorid used? 4 What are the indications for the use of chloral hydrate and how is it administered? 5 What ammonium salts are used as expectorants and what is their action? 6 How would you treat a case of acute opium poisoning? 7 What are the indications for the administration of nitroglycerin and how is it administered? 8 What are the uses of cinchona and its alkaloids? 9 When and how would you administer amyl nitrite? 10 In what conditions and how would you administer potassium bromid?

PHYSICAL DIAGNOSIS

1 How would you differentiate between an abscess of the liver and acute hepatitis? 2 Define vocal resonance and state its significance in pulmonary *diseases 3 What are the physical signs of* pericarditis with and without pericardial effusion? 4 Differentiate between *inguinal hernia and hydrocele of the cord* 5 Name the commonest causes of true dyspnea and what are the physical signs of progressive dyspnea? 6 Give the differential diagnosis between paralysis agitans and tabes dorsalis 7 What are the commonest causes of and how would you diagnose unilateral facial paralysis? 8 Differentiate enlargement of the cervical glands (cervical adenitis) due to (a) tuberculosis, (b) syphilis (c) malignant disease (d) Hodgkin s disease 9 What are the physical signs of mitral regurgitation when compensation is established? 10 How would you differentiate (a) biliary colic (b) renal colic (c) floating kidney?

SURGERY

1 What are the causes of gangrene? 2 Differentiate between typhoid fever and appendicitis 3 What is coxalgia? Give treatment. 4 Give treatment of an acute infection of the hand 5 *Describe and give treatment of Colles fracture* 6 Diagnosis and treatment of strangulated inguinal hernia 7 What is a carbuncle? Give treatment 8 Give the different forms of dislocation of the shoulder Describe how you would reduce the dislocation 9 What is hyperthyroidism? What operation may be indicated in such a case? 10 Diagnose pleuritic effusion purulent and non purulent.

OBSTETRICS

1 Name the joints of the obstetric pelvis 2 What is the perineal body and what are its functions? 3 What conditions justify the irrigation of the puerperal uterus? 4 How would you manage a breech presentation? 5 What is version? (b) State two conditions that would require it 6 What signs in delayed labor are indications for the use of forceps? 7 What conditions maternal and fetal would justify the induction of premature labor? 8 Treat a case of puerperal eclampsia. 9 What is involution and when is it completed? (b) Subinvolution and its treatment? 10 What are the signs of fetal death *in utero* and what treatment is necessary when such a condition exists?

GYNECOLOGY

1 Distinguish symptomatically between uterine carcinoma and uterine fibromyoma (b) On what does the possibility of permanent operative cure in cancer depend? 2 What essentials are to be followed in operating *for secondary repair of the completely lacerated* perineum? 3 What are the principal causes of pelvic peritonitis? 4 Describe the blood supply of the uterus. 5 What are the principal causes of dysmenorrhea? 6 Of what pathologic significance is the retroverted uterus in the virgin female? 7 Describe the mechanism of uterine prolapse What surgical treatment will you apply in cases of complete procidentia complicated with cystocele and rectocele? 8 Differentiate between uterine polypus and inversion of the uterus 9 Why is gonorrhea in women so difficult to *cure? 10 Describe the vulvovaginal (Bartholin s) glands*

HYGIENE

1 At what temperature would you keep a sick room and how would you ventilate it for a person with pneumonia? 2 In dormitories, what should be the minimum of air space for each occupant? 3 How would you disinfect typhoid excreta? 4 How would you disinfect a room after a case of scarlatina? 5 Give hygiene and general care of a case of pulmonary tuberculosis to prevent infection of others 6 Give general directions for the care of public schools and care and inspection of school children 7 What diseases are propagated by drinking water? How may impurities in water be detected? 8 Name four diseases that may be transmitted by milk. 9 What is an epidemic disease an endemic disease a sporadic disease? 10 What deleterious gases accumulate in ill-ventilated rooms?

Book Notices

HANDBUCH DER GESAMTEN MEDIZINISCHEN ANWENDUNGEN DER ELEKTRIZITÄT EINSCHLIESSLICH DER RÖNTGENLEHRE. Herausgegeben von Prof Dr Med. H Boruttau Privatdozent für Physiologie an den Universität Berlin und Prof. Dr Med L Mann Privatdozent für Nervenheilkunde an der Universität Breslau Volume 2 Part 2 Paper Price 30 marks Pp 1102 with illustrations. Leipzig Werner Klinkhardt, 1911

The first volume of this work was reviewed in these columns when it appeared, some months ago In this, the second volume, the therapeutic uses of electricity are discussed

In considering the therapeutic value of electricity one must distinguish clearly between the effects of electricity as a physical agent and the effects of electricity *per se* as for instance in the use of the ordinary galvanic or faradic current or the so called franklinization That distinct local effects of a physiochemical nature may be produced by electricity is unquestioned, but it is doubtful if any such things exist as intangible and mysterious therapeutic effects in general conditions or even in local conditions On this phase of the subject some of the contributors to this volume at times are quite frank Thus, in a chapter devoted to the factors which have a beneficial influence, it is stated, concerning the beneficial effects of the electric bath, that the bath itself is the great therapeutic factor and probably of much greater importance than the electricity Under electric massage it is stated that a scientific foundation for such a procedure has not yet come to hand

'Suggestion may be regarded as an important curative factor in the different electrotherapeutic methods" The suggestion may be intentional or unintentional When in a hysterical paralysis, contracture or anesthesia, the paralyzed limb is treated with the static spark or with the faradic brush or with the four celled bath, it is not electrotherapy but intentional suggestion" That the author himself doubts the therapeutic value of electricity is well shown by the following sentence "In the discussion of the effects of electricity I have shown in what manner one must *imagine* the curative effect of the electricity *in case such an effect really exists"* These quotations indicate that one must not place too much confidence in the use of electricity, or expect too much from it, as a therapeutic agent.

Part 3 of the volume treats of electric lighting, electric heating and electric motors as used by the physician, and of electrolysis, cataphoresis and phototherapy These chapters, although very technical, are of great scientific and practical interest The work as a whole deals with the subject of electricity in a most thorough and comprehensive manner

Studies in Cancer and Allied Subjects Pathology Conducted under the George Crocker Special Research Fund at Columbia University Volume II Boards Price $5 net Pp 267 New York The Columbia University Press 1912

This book consists of twenty seven articles by Isaac Levin, M J Sittenfeld, Robert A Lambert, Frederic M. Hanes, Robert T Frank and A. Unger, previously published in such easily accessible journals as the *Journal of Experimental Medicine, Surgery, Gynecology and Obstetrics*, etc, and all dealing with the results of investigation into some phase or other of "the cancer problem" Prof W G MacCallum writes an introduction The collection in this way of the articles published from one laboratory or institute is of some convenience to active workers in the same field, and it also forms a more or less imposing monument, in appearance at least, to the institution from which it is issued, yet there is occasion for the question whether in view of the expense and the increased labor on the part of libraries such republication really is worth while In the United States this kind of republication is prevalent at present In many cases it is feared that the chief result is accumulation of books that are not consulted No doubt the great value of the investigative work represented in the volume under consideration is such as to warrant republication, but no matter how epochal the work, it would not justify publication in the form selected in this instance The volume is so large as to be unwieldy, many book shelves will not receive it standing, and the blank margins are of such unusual width that considerably less than half of each page is occupied by print, hence more than one half of the book is unused paper That the Columbia University Press could become responsible for such an example of pure waste and lack of judgmént in book making passes understanding

A Second Study of Extreme Alcoholism in Adults with Special Reference to the Home Office Inebriate Reformatory Data By David Heron D Sc. University of London Francis Galton Laboratory for National Eugenics Eugenics Laboratory Memoirs XVII Paper Price 5 shillings Pp 95 London Dulau & Co 1912

As social questions are to be solved not by opinion but by statistical facts, the data collected by Dr R. Welsh Branthwaite, inspector under the British inebriates acts, marked an advance in the study of inebriety A detailed account was given of 166 men and 865 women inebriates Heron's memoir is based on a consideration of these women inebriates in view of their larger number and because the problems of extreme alcoholism concern women to a greater extent than men inebriates Figures showing the relative intensity of drunkenness in men and women prove that

men, at most differ as Heaven and Earth
But women worst and best as Heaven and Hell

After an exposition of the material, Heron compares the various characteristics of inebriates as a whole, as modified by different intensities of alcoholism, and as contrasted with mental defects in the general population He has taken pains to avoid the pitfalls in the path of interpreters of statistics, and his presentation of the subject will interest students of the social questions He concludes with a survey of the results of reformatory treatment, and makes practical recommendations for further inebriety legislation

The Business of Mining A Brief Non Technical Exposition of the Principles Involved in the Profitable Operation of Mines By Arthur J Hoskin M L. Cloth Price $1 50 Pp 224 with illustrations Philadelphia J B Lippincott Company 1912

Those physicians, who are inclined to invest rashly in mining stocks and enterprises, might find it advantageous to read this little book on "The Business of Mining" After describing in a more or less non technical way the varieties of mines and methods of mining, the author devotes considerable space to a sensible discussion of mining as an investment, giving some needed attention to the genus "promoter," a study of whose methods may be of interest and value to the would be investor

Miscellany

Supervision of Communicable Diseases in New York

The sanitary and public health control of the 5,100 000 persons comprising the population of New York City must of necessity furnish not only much information of general interest but also many object lessons of success and failure which can well receive wide attention from public health officers and sanitarians The October bulletin of the New York Department of Health reviews the organization and work of its division of communicable diseases, a division instituted in 1892 as a defensive measure against a threatened invasion of cholera When this danger had passed, the division undertook the study and control of diphtheria and made bacteriologic examinations for tubercle bacilli for private physicians, together with routine laboratory reports on suspected cases of typhoid, malaria and meningitis The sanitary supervision of these diseases followed naturally

In 1905 the division was put on its present basis Its functions now include (1) the sanitary supervision of tuberculosis, typhoid, cerebrospinal meningitis, pneumonia malaria, puerperal septicemia, abortion, erysipelas, poliomyelitis and venereal disease, (2) the direction of tuberculosis camps and clinics, (3) the administration of diphtheria antitoxin and intubation, (4) the direction of the diagnosis laboratory and collection of specimens throughout the city

The administration of diphtheria antitoxin for curative and prophylactic purposes and the practice of intubation have been maintained since 1895 In 1911, 6,167 patients were injected with antitoxin Tuberculosis is reportable and the registration and supervision of this disease are facilitated by a system of health department clinics for tuberculous patients In these tuberculosis dispensaries a total of 28,570 persons received treatment in 1911, of whom 16,562 were new cases In 1906 an original and effective line of work was begun by fitting out an abandoned ferry boat as a day camp for tuberculous patients living at home This work has since been extended to include two other camps under the department and several connected with hospitals In these camps a hot dinner is provided at noon, and lunches of milk and eggs in the morning and afternoon Open air classes are conducted for the children, the equipment being provided by the Department of Education The Department of Health conducts a tuberculosis sanatorium at Otisville, N Y, for admission to which there is always a long waiting list

The sanitary supervision of typhoid includes the investigation of all cases by inspectors, who visit both the patient and his physician, more complete reports from the physician on the termination of the disease and a thorough investigation of the possible sources of infection in each case, whether by contact or through the food supply Pin maps of each borough show any unusual grouping of cases and may point out the source of infection Also a tabulated record is kept of the date of onset and the milk supply in each case The division is preparing to make prophylactic typhoid vaccinations on request or in local epidemics, and it is expected that in the near future removal to hospital will be required when conditions at home preclude proper preventive measures In 1911 3,080 cases of typhoid were reported and 13,521 inspections were made

A similar and even more rigid supervision is maintained in cerebrospinal meningitis and anterior poliomyelitis Reports are required of all cases of malaria, pneumonia, erysipelas, abortion and puerperal septicemia, but patients are not visited Cases of malaria reported are investigated to determine the validity of the diagnosis and whether it is supported by laboratory findings Reports of venereal disease have only recently (1912) been required These reports are filed but are not open to the public The laboratory will soon be prepared to make all examinations requisite in connection with these diseases The work of the diagnosis laboratory in 1911 included 40,048 sputum examinations, 68,868 throat cultures 10,549 examinations of typhoid blood, 2,376 of malarial blood, 2,926 of typhoid urine, besides numerous examinations of pus and spinal fluid specimens and miscellaneous preparations

The budget of the division of communicable diseases for 1912 was $435,397 00

Sterilization of Drinking Water with Minimal Amounts of Calcium Hypochlorite—The method of sterilizing water according to Dserschgowski's technic has recently been tested at Cronstadt, Russia, and Antonowsky reports the results in the *Ztschr f Hygiene*, 1912, lxxii, 421 His aim was to determine the relative resistance of cholera and typhoid germs and the colon bacillus to amounts of chlorinated lime in the water too small to affect its taste His experiments demonstrated, he states, that the effectual agent in sterilization of water by neutral solutions of chlorinated lime is the oxygen The effect consequently depends on the oxidizableness of the water rather than on the proportion of chlorinated lime. With addition of catalyzers, such as hydrogen or manganese dioxid, the bactericidal action of chlorinated lime is increased. With a proportion of 0 0025 gm active chlorin to the liter, ten minutes are required for partial destruction of the germs and checking of the growth of the others, this interval is necessary on account of the slowness of the chemical changes involved, the gradual release of hypochlorous acid in the solution of chlorinated lime He regards the method on the whole as a good help in combination with mechanical measures for purification of drinking water

The Dangers of Uterine Fibroids—It has been the custom in past times to consider fibroid tumors of the uterus as harmless neoplasms, to be put up with, lived with and finally to be buried with Further we have been taught to believe that the latter supposition is in no way hastened by the presence of a fibroid tumor So ingrained was this view that even quite recently an eminent authority stated in a paper that death from uterine fibroids was the rarest occurrence The more, however, we see of gynecologic and obstetric practice, the more in my opinion, we must recognize that uterine fibroids bring in their train very serious disabilities lead to much chronic invalidism, and play a by no means small part in hastening the demise of many individuals —Thomas G Stevens in *Clin Jour*, London

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Medicolegal

Validity of Act Giving State Board of Health Authority Over Water-Supplies

(State Board of Health vs City of Greenville (Ohio) 98 N E R 1019)

The Supreme Court of Ohio holds that the act of the General Assembly passed April 7, 1908, entitled "An act to authorize the State Board of Health to require the purification of sewage and public water supplies and protect streams against pollution," now being Section 1249 et seq of the General Code of Ohio, is a valid and constitutional exercise of the police power of the state The court says, among other things, that this legislation is designed to preserve and protect the public health and comfort, and therefore falls directly within the police power of the state This power includes anything which is reasonable and necessary to secure the peace, safety, health, morals and best interests of the public

In granting to a municipality certain powers to be exercised for the benefit of the public health of that municipality, the state has not relinquished its authority and control in this important particular over any of the territory comprised within the limits of the state The duties and powers of the State Board of Health extend throughout the state irrespective of political divisions or territories embraced within municipalities The general provisions for the preservation of the life and health of the people of the state are no more suspended in the territory comprised within a municipality than are the criminal laws of the state and this case would illustrate the folly of a state delegating to any municipality full and complete control of matters pertaining to the public health A municipality might then in the preservation of sanitary conditions in its own territory work incalculable mischief to the health and comfort of people living in adjacent territory To prevent this being done, it is primarily necessary that there should be one central authority clothed with the power of affording equal protection to all

The state does not seek to control the discretion of the municipal authorities in this matter, but, on the contrary, refuses to commit to them any discretion touching the particular matters committed to the care and control of the State Board of Health In so far as they are charged with any duty in reference to the carrying out of the orders and directions of the State Board of Health, they are ministerial officers only, and it is fully settled that a public officer may be required to perform a ministerial act, and that a failure or refusal by such officer to perform a ministerial act may be made a criminal offense and punished as a misdemeanor

The provision in this legislation by which a municipality may challenge the judgment of a State Board of Health and submit the question to a board of arbitration composed of men skilled in sanitary work is a most liberal provision so far as municipalities are concerned, and far more liberal than many of the statutes relating to the powers of a State Board of Health There is no theory on which a mere agency of the state has a right to litigate the right of the state to enforce, through any agency it pleases, sanitary rules and regulations for the preservation of the health and comfort of all the people of the state

Nor is this legislation unconstitutional because it delegates the taxing power of the city to the State Board of Health

If the city possessed the absolute right to discharge its sewage into a living stream of water, thereby polluting the same and destroying all riparian rights below and creating a menace to the health and comfort of those living on the banks of this stream below the point of discharge, then it might be said that any change in the manner of sewage disposal would not be for the benefit of the city, but for those citizens of the state residing below the outlet of the city sewers But the city has no such absolute right, and whenever this condition of affairs exists it is right and proper for the state to interfere and prevent it from a further continuance of this nuisance, and, the city then having no other means for the disposal of its sewage, it is primarily for its benefit that such disposal plant must be established.

The health of the inhabitants of the city is still a matter of concern to the state, and of such vital concern that the General Assembly has not thought proper to commit it exclusively to the control and discretion of men who may or may not have any particular ability or experience in sanitary affairs The loss of a single life is a direct economic loss to the state, and therefore it wisely refrains from committing to inexperienced people final discretion as to the means and methods of preserving the life and health of its citizens, but, aside from the concern of the state for the health and comfort of the residents of any one city, its vigilance seeks to serve a larger purpose Cities are no longer inclosed by stone walls and separate and apart from the balance of the state The sanitary condition existing in any one city of the state is of vast importance to all the people of the state, for, if one city is permitted to maintain insanitary conditions that will breed contagious and infectious diseases, its business and social relation with all other parts of the state will necessarily expose other citizens to the same diseases But with the wisdom or folly of withholding from the local authorities final discretion over these matters, the court is not concerned It is beyond question the right of the General Assembly to do so, and the court need not, and ought not, to inquire what motives moved it in withholding such power

The disposal plant is for the benefit of the residents of the city It is primary duty of the city to provide for sanitary disposal of its sewage, and it is not in violation of any provision of the constitution that it should bear the entire cost of erecting and *maintaining a purification plant, and to require it* to do so is not an arbitrary unreasonable, or unfair exercise of the police power of the state.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Public Health, New York

November, II, No 11 pp 825 895

1 *Cold Storage and Public Health W T Sedgwick Boston
2 *Physics of Refrigeration P H Bryce Ottawa Canada
3 Bacteriology of Fermentation and Putrefaction in Relation to the Conservation of Foods S C Prescott, Boston
4 Hygienic and Economic Results of Refrigeration in the Conservation of Poultry and Eggs M E Pennington Washington D C
5 *Hygienic Results of Refrigeration in the Conservation of Fish and Mollusks H D Pease New York.
6 *Cold Storage in Relation to the Food Supply H E Barnard Washington D C
7 Effects of Temperature and Humidity on Fatigue F S Lee New York
8 Public Health—Past and Future H W Hill Minneapolis
9 The Trend of Medico-Social Effort in Child Welfare Work W C Phillips New York.
10 Recent Typhoid Outbreaks in Kona Hawaii E S Goodhue Hawaii

1 **Cold Storage and Public Health** —Sedgwick believes that, by cold storage to day, rightly supervised by boards of health, as it should be, the public health has been and will be immensely promoted The public health will also be promoted indirectly through the cheapening of cost of food in two ways first, by saving what would have been lost at one season and keeping it over to another, when prices would have been much dearer than if it had not been kept and the supply at the later period increased, and second, by encouraging production

2 **Physics of Refrigeration** —Successful refrigeration, Bryce points out, involves that goods shall be taken from cold storage in the pink of condition, hence, this demands that perfectly fresh, matured products shall at the beginning be placed in the cold storage and when so placed given the most skilful treatment possible during their detention there Being essentially an economic proposition, it means the most careful attention by the engineer in charge of the temperature and relative humidity of the cold storage room, assuring that such be neither too high nor too low The more delicate the thermometer, the greater the success in maintaining evenness of temperature. While the perfection of any product placed in cold storage is a *sine qua non* to highest success, whether hygienic or commercial, yet permanent results must depend on how economically and yet efficiently the mechanical and physical appliances involved perform their work

5 **Refrigeration of Fish** —From the sanitary standpoint, at least, says Pease, the problems in the refrigeration or freezer storage of fish and oysters relate almost without exception to the conditions under which the food or oysters have been caught or gathered and prepared for refrigeration, and to the methods of handling these food products after they have been moved from the influence of processes of refrigeration

6 **Cold Storage and Food Supply** —In order to promote uniformity of legislation by the several states, a thing greatly to be desired in all regulative legislation, the National Association of Food Officials in 1911 gave to a committee of its members the task of drafting a model cold storage bill Barnard is chairman of that committee The committee recognizes the need for legislation first, to protect the public health against the sale of unfit food, second, to prevent cornering of the food supply and consequent unfair prices to the consumer, and third, to insure both to the consumer and to the producer the sale of goods properly labeled The committee defines cold storage as a warehouse for the holding of food products at or below a temperature of 40 F It holds that a cold storage warehouse is an establishment employing refrigerating machinery or ice for the purpose of refrigeration where food products are stored for thirty days or more at a temperature of 40 F It assumes that the states have already at hand machinery for the sanitary control of food producing establishments, and it provides that the operators of cold storage warehouses shall obtain a license from the state board of health for conducting the business after a sanitary inspection has shown the warehouse to be in satisfactory condition In the event a warehouse so licensed becomes unsanitary, it is made the duty of the state board of health to revoke the license The bill provides that a complete record shall be kept of all goods entering storage and that a quarterly report of such facts shall be presented to the state board of health It is believed that such reports will prevent the cornering of the food supply It provides that no article of food shall be placed in storage if not sound and in good condition, or unless it has been prepared in accordance with the pure food and sanitary laws The committee is unanimous in its belief that cold storage legislation should not antedate pure food and sanitary food legislation but rather should follow and supplement it When food is placed in storage the date of entry is plainly marked on the container, and when removed it is again marked No goods shall be held in cold storage for a longer period than twelve calendar months, except under certain conditions referable to the state board of health It provides that goods which have been in storage must be labeled "Cold Storage" in such manner that the consumer knows when he purchases his eggs, for instance, that they are storage eggs It provides that the state board of health may make all necessary rules and regulations to secure a proper enforcement of the law

American Journal of Neurology, New York

November VIII, No 11 pp 567 602

11 *Renal Hematuria. H L Elsner New York
12 Hematuria with Case Reports C M Harpster Toledo Ohio
13 Relation of Proctology to Urology G B Evans Dayton Ohio
14 Gonorrhea in an Artificial Urethra G F Lydston Chicago
15 A Topographic Cysto Urethroscope J London New York
16 Case of Congenital Double Urethra. W Lenehan Nashville, Tenn
17 Infantile Kidney and Occlusion of Ureter with Nephrolithiasis on the Opposite Side J S Lewis and C W Bethune Buffalo N Y
18 Survival After Several Operations in Spite of Unusually Low Phenolsulphonephthalein Output E L Keyes New York

11 **Hematuria** —Elsner says that many cases of renal hemorrhage whether associated with pain or not, will remain unexplained In reaching conclusions, however, it will be wise to extend the search beyond the kidneys themselves, to take urine, heart, blood vessels, blood pressure and the background of the eye into consideration and wherever possible couple the knowledge gained from a thorough consideration of these organs with that which is revealed by the cystoscope, though we are not to be disappointed if occasionally cystoscopy and segregation of the urine fail to supply convincing data

Archives of Diagnosis, New York

October V No 4 pp 309-408

19 Errors in Clinical Diagnosis of Mental Disorders Associated with Cerebral Syphilis. F M Barnes Washington D C
20 New Method of Duodenal Intubation A Abrams San Francisco and G O Jarvis Philadelphia
21 Duodenal Intubation for Diagnosis F B Turck New York
22 Atony of Cecum Procedure Facilitating Its Recognition H Stern New York.
23 Avulsion of Mesentery with Report of Case H B Delatour Brooklyn
24 Hysterical Paralysis of Intestine (Paralysis Intestinalis) of Somewhat Rare Form H Illoway New York
25 Present Value of Serodiagnosis of Visceral Malignant Neoplasms and Plea for a Universal Technic B G R Williams Paris Ill
26 *Dome-Like Appearance of Abdomen Point in Differential Diagnosis of Extra Uterine Pregnancy A Shulman New York
27 Practical Points in Diagnosis of Some Important Eye Conditions C Graef New York

26 **Dome Like Appearance of Abdomen** —A sign and symptom of extra uterine pregnancy, which Shulman says, is pathognomonic and still unmentioned in the text books on gynecology, is the dome like appearance of the abdominal wall in ruptured extra uterine pregnancy caused by the large accumulation of blood in the pelvic and abdominal cavities in sufficient quantity to force the overlying structures, the peritoneum, muscles, fasciae, areolar tissue and skin of the abdominal wall in the [illegible] up [illegible] outward in the direction of least resist[illegible] or cup [illegible] roof, as a rule, makes [illegible] the being overcome with [illegible] fa [illegible] the floor in a fainting

acute anemia In exceptional cases there is a sudden loss of a large amount of blood into the peritoneal cavity In such a case the symptoms are striking and urgent The patient's face is blanched, her nose, forehead and fingers are cold, the pulse is rapid and weak and failing, a cold sweat appears on the face, respiration is short and labored, and over all is the intense pain which is due to the blood spreading over the peritoneal cavity and of which the patient complains as long as she has sufficient strength.

Archives of Internal Medicine, Chicago

November 15 X, No 5, pp 405 520

28 *Influence of Radium and Its Decomposition Products on Ferments T R Brown Baltimore
29 Pathologic Deviations in Chemistry of Uremic Blood N B Foster New York
30 *Effect of Intraspinal Injections of Ringer s Solution in Different Amounts Under Varying Pressures W S Carter Galveston Texas
31 Two Cases of Anaphylactic Serum Disease Over Six Years After Primary Injection of Horse-Serum (Yersin s Antipest Serum) S T Darling Canal Zone
32 *Pathogenesis of Purpura Hemorrhagica with Special Reference to Part Played by Blood Platelets W W Duke Kansas City Mo
33 *Wassermann Test in Tropics L B Bates Canal Zone*
34 Poisoning by Nitric Oxid Fumes. F C Wood New York
35 *Organic Iodin Preparations Their Pharmacology and Therapeutic Value F C McLean Portland Ore

28 **Influence of Radium on Ferments**—None of the radium preparations used by Brown seemed to have any effect on the autolytic ferment of the liver, although saturated lead chlorid solution appeared to activate it, with diastase the very radio active radium possessed an inhibiting effect, while the less active radium emanations had a stimulating effect, this increasing with the length of time and the amount of fluid used, while this ferment is also markedly activated by the salts in evaporated tap water, with pepsin Brown found a slight inhibiting effect, more marked with very radio active radium, although slight in comparison with the inhibiting effect of saturated lead chlorid solution

30 **Intraspinal Injections of Ringer's Solution.**—An experimental inquiry was made by Carter into the cause of the severe shock which sometimes follows the injection of serum into the subarachnoid space of the spinal cord. The sole object of his investigation has been to determine the mechanical effect on the spinal and medullary centers, of increasing the amount and pressure of fluid in the spinal subarachnoid space For this purpose Ringer's solution has been used, as this contains the different inorganic salts of a real physiologic salt solution and is therefore preferable to the isotonic solution of sodium chlorid commonly called by that name He found that no definite limit can be fixed to which the intraspinal pressure may be increased with safety In some animals serious symptoms developed when it was increased to 10 mm of mercury, while in others this only occurred with a pressure of 50 or 60 mm of mercury The normal intraspinal pressure in dogs varies from 3 to 10 mm. of mercury, or 40 to 135 mm of water A sudden increase of pressure, even though a small amount be given, is more dangerous than a larger amount given gradually by gravity The first mechanical effect of increasing the intraspinal pressure from injections made by lumbar puncture is the cessation of respiration, quickly following it, or coincidently with it there is profound cardiac inhibition, which causes a tremendous and sudden fall of blood pressure The fall of pressure is often so abrupt that it frequently drops from normal to zero within a half minute Atropin removes the cardiac inhibition and restores blood pressure by its paralyzant effect on the cardio inhibitory nerve center Atropin fails to stimulate the respiratory center, while cocain is the most valuable respiratory stimulant for such an emergency

Carter says that these drugs should be given together in full dose before making a spinal puncture or intraspinal injection The injection at the site of spinal puncture would also produce local anesthesia The condition could thus be prevented more easily than it can be remedied after alarming symptoms suddenly develop This is particularly true if chloroform is used as an anesthetic, as the inhalation of chloroform in concentrated vapor produces similar effects and thus makes the condition more serious The fall of pressure is not due to a vasomotor disturbance There is, therefore, no indication for the administration of epinephrin On the contrary, it is positively contra indicated on account of its well known action in producing cardiac inhibition Lowering the intraspinal pressure by allowing fluid to escape from the needle, after the characteristic symptoms develop, fails to relieve the condition The advantage of using atropin and cocain before intraspinal injections consists not only in lessening the dangers of sudden death, but it enables a larger amount of fluid to be injected without producing dangerous symptoms from the mechanical effect This is a great advantage in administering antimeningococcus serum, as its action is chiefly a direct, local one on the living bacteria and the benefits are in proportion to the amount administered

32 **Pathogenesis of Purpura Hemorrhagica**—By comparing symptoms and blood findings in all patients observed during a period of three years, who displayed a pathologic tendency to bleed, Duke succeeded in picking out a certain group of cases which presents a characteristic clinical picture, which is due wholly or in part, it is believed, to an enormous reduction in the number of blood platelets The disease in its severer form almost constantly presents the following symptom complex 1 Purpura of one or two types—petechias or ecchymoses 2 Hemorrhage from mucous membranes 3 A tendency to bleed from every vascular lesion, no matter how produced In consequence of this tendency, the bleeding time is very greatly prolonged, often exceeding two hours 4 A normal coagulation time 5 A firm blood clot 6 In consequence of the absence of platelets, a clot which does not retract and extrude serum In all cases (seven) seen by Duke showing the above picture, the number of platelets was reduced almost to a point of absence Counts were all below 10,000, and as a rule, below 1,000 (The normal platelet count varies from 200,000 to 400,000)

The disease in its milder form presents a different picture The most common symptoms in the milder cases are ecchymoses following slight injury and epistaxis Sometimes neither purpura nor bleeding from normal mucous membranes appears and the only evidence of hemorrhagic diathesis in severe hemorrhage accounted for to a greater or less extent by local causes, for example, continued bleeding from intestinal ulcers, from esophageal varices, profuse and prolonged menstruation, etc The bleeding time in the mild cases is sometimes normal and sometimes slightly or moderately prolonged The coagulation time is normal, the clot firm, retractility diminished The diagnosis rests on the finding of a reduced platelet count It varied, in Duke's cases (six), from 20,000 to 65,000

Hemorrhagic diathesis can be followed best in this disease by determining the bleeding time at frequent intervals The simple observation of purpura, spontaneous hemorrhage, etc, may lead to false conclusions in regard to the general condition, for these symptoms are often due to general and local causes combined. When there was opportunity to make such observations it was noted that the disease appeared when the platelet count fell to an extremely low level, persisted so long as the count remained low and disappeared as soon as the count rose The disease was relieved immediately in two cases by direct transfusion of blood The relief was coincident with an increase in the platelet count, evidently a direct result of the transfusion Symptoms returned when the platelet count fell again

The disease was produced in rabbits by reducing the platelet count with diphtheria toxin This disease appeared the day the platelet count descended to a point of almost complete absence and persisted until the platelet count rose Hemorrhagic diathesis in mild form was brought about with repeated injections of benzol In the latter experiments the count did not descend to such a low level as in the former In a series of thirty eight animal experiments, in which the platelet count was enormously changed with subcutaneous injections of benzol, diphtheria toxin and tuberculin, and also in a large series of cases in humans in which routine platelet counts were made, only those having extremely low counts gave the complete symptom complex described above Several platelet counts between 40,000 and 75,000 were observed in patients who had no marked tendency to bleed This seems to be the level at which patients may or may not have an abnormal tendency to bleed No counts lower than these were observed in patients not subject to hemorrhage The disease has been observed complicating a varied set of diseases—in severe form in lymphocytic leukemia, hemorrhagic small pox, tuberculosis, nephritis benzol poisoning, aplastic anemia and diphtheria The one feature in common in these cases was the low platelet count and the modification of the clot dependent on it, i. e, absence of retractility Purpura hemorrhagica of the type described would seem, therefore, a symptom, not a disease It is caused apparently by any agent which reduces the platelet count to a sufficient degree

35 **Organic Iodin Preparations**—From evidence presented as to chemical nature, absorption and excretion, distribution physiologic action and clinical results, McLean draws the following conclusions with regard to the therapeutic uses of the organic iodin compounds Up to the present it has not been shown that the organic iodin preparations, with the exception of preparations of thyroid, have any specific action in pathologic conditions, except the action of iodin after separation from the molecule The iodized proteins seem to be of advantage for therapeutic use only in so far as they avoid gastric irritation The more stable compounds are apparently not entirely split in the body and are therefore not well utilized, while the less stable compounds have no advantages over the alkaline iodids, either as to local effects, or as to rapidity of absorption and excretion The iodized fats and fatty acids appear to have some advantage when the continuous action of small amounts of iodin is desired. They are more slowly and evenly split, and the amount of available iodin in the blood does not vary from time to time to the extent that it does when the alkaline iodids are administered The use of the iodized fats in such conditions as arteriosclerosis, bronchial asthma, lead poisoning etc, probably has some rational basis, therefore, on physiologic grounds These substances are also as a rule non irritant to the stomach The difference in frequency of iodism is probably due to the difference in the amount of available iodin present in the body at any one time When large amounts of iodin are desired, as in cerebrospinal syphilis, avoiding the danger of iodism would be at the sacrifice of therapeutic efficiency The use of organic iodid preparations with toxic side actions, due to the molecule or its splitting products, should of course be discouraged The products of iodin with the higher fats and fatty acids are generally free from toxic actions

Boston Medical and Surgical Journal

December 5 CLXVII, No 23 pp 791 826

36 Heredity with Special Reference to Law of Gregor Johann Mendel O S A. J M Connolly Boston
37 Teeth and Their Relation to Body G H. Wright Boston
38 *Treatment of Pulmonary Tuberculosis by Artificial Pneumothorax According to Method of Forlanini Report of Twenty One Cases (To be continued) G M Balboni Boston
39 Blood in Case of Severe Hemorrhage J E Ash Boston
40 Fatal Endocarditis Due to Capsulated Gram Staining Diplococcus Occurring in Chains W H Smith Boston

38 **Artificial Pneumothorax in Lung Tuberculosis**—The eighteen months' experience Balboni has had in the treatment of pulmonary tuberculosis in its different stages by artificial pneumothorax has convinced him of its place in the treatment of this disease He says that any one who has had any experience whatever with present methods of treatment for pulmonary tuberculosis must feel a moral obligation to try every new method that promises any degree of success at all, and it becomes a duty to do so when a method of treatment is presented by which good results have been obtained in advanced cases of phthisis

It is to be hoped that with the necessary wisdom, the method will be applied on a larger scale and earlier in cases in which the spontaneous evolution shows a progressive and destructive tendency Phthisiology is not so rich in resources as to justify overlooking a method of treatment that has given such good results

Delaware State Medical Journal, Wilmington

November III No 12 pp 1 26

41 Homeopathy Old and Modern What Is Left of It. A Robin Wilmington

Journal of Indiana State Medical Association, Fort Wayne

November 15 V, No 11 pp 465 504

42 *Tuberculosis in Children T V Keene Indianapolis
43 *Tuberculin Treatment T Potter Indianapolis
44 *Home Treatment of Tuberculosis W T S Dodds Indianapolis
45 Brill's Disease E Charles Summitville

42, 43 and 44 Abstracted in The Journal, November 2, p 1644

Journal of Infectious Diseases, Chicago

November II No 3 pp 295 504

46 *Experimental Studies on Milk E H Schorer Boston
47 *Study of Streptococci from Milk and from Epidemic Sore Throat and the Effect of Milk on Streptococci E C Rosenow Chicago
48 *Content in Antibodies of Normal Human Colostrum and Milk R Tunnicliff Chicago
49 *Studies on the Biochemistry and Chemotherapy of Tuberculosis I The Permeability of Tubercle for Iodid Compounds and Proteins H G Wells and O F Hedenburg Chicago
50 *Id II Intravitam Staining of Tuberculous Guinea Pigs with Fat Soluble Dyes H J Corper Chicago
51 Id III The Lipase of Bacillus Tuberculosis and Other Bacteria H G Wells and H J Corper Chicago
52 *Production of Antirabic Immunity by Intraspinal Injections of Virus D L Harris St Louis.
53 Natural and Induced Immunity to Typhus Fever J F Anderson and J Goldberger Washington D C
54 Immunization by Means of Cultures of Trypanosoma Lewisi F G Novy W A Perkins and R Chambers Ann Arbor Mich
55 *Influence of Certain Oxidizing Agents (Sodium Iodosobenzoate and Sodium Iodoxybenzoate) on Phagocytosis A Arkin Chicago
56 Application of the Complement Fixation Reaction to the Diphtheria Group of Organisms M E Morse Boston
57 Studies on Hog Cholera Experimental Hyperimmunization W E. King and R H Wilson Detroit
58 Production in Vitro in the Normal Brain of Structures Simulating Certain Forms of Negri Bodies E Steinhardt D W Poor and R A. Lambert New York
59 Bovine Infectious Abortion Epizootic Among Guinea Pigs F M Surface Lexington Ky
60 *Intraleukocytic Bodies in Scarlet Fever D J Glomset Chicago
61 Phagocytic Activity of the Leukocytes in Measles R Tunnicliff Chicago
62 *Action on Dogs of Toxic Substances Obtained from Virulent Pneumococci and Pneumonic Lungs E C Rosenow and A Arkin Chicago

46 **Experimental Studies on Milk**—The results of Schorer's extensive and detailed studies on milk may be summarized as follows Better classes of milk contain little sediment, market milks contain more dirt but fewer cells than certified milks The Tromsdorff tube is a convenient method of examining for dirt and cells It is relatively easy to produce milk of low bacterial content, but the greatest care must be constantly exercised to prevent occasional high counts Increase in bacterial content was more rapid at the higher temperatures, and at a temperature just above freezing there was little bacterial multiplication until after the seventh day but from that time on the increase was rapid Cream on rising carries with it a large portion of the bacteria in milk Separator cream does not take with it as large a portion of the bacteria as does gravity cream When milk was stored and the cream and skimmed milk were not remixed, bacterial multiplication was not as great during the same period of storage as when the milk was mixed repeatedly Of the bacteria in good milks about 30 per cent were acid producers, while 20 per cent of those in inspected and 30 per cent of those in certified and pasteurized milks were protein digesters At the higher temperatures fermenting organisms increased more rapidly in certified milk, but at the lower temperatures the most marked increase was observed in pasteurized milk The percentage of peptonizing types increased only at low temperatures Apparently gravity cream contains the larger portion of peptonizing forms, while the skimmed milk below contains most of the fermenting forms when milk has been refrigerated

On long storage butyric acid and putrefactive odors became marked When mil[illegible] [illegible]ed at low temperat[illegible] the development of [illegible] have [illegible] by acid odors [illegible] me t[illegible] certified and [illegible] Protein dec[illegible] pally at a temperature near the freezing point Adding an equal part of 68 per cent alcohol to milk is an easy and reliable test for the detection of beginning acidification The fear of putrefying organisms in pasteurized milk is not warranted as far as market milk pasteurized by the holding method is concerned While predominance of putrefying bacteria is not the only objection to pasteurized milk, it has been an important one Certified milk, because it contains but little cow manure, is infected principally with spore bearing organisms, it is always well refrigerated, and contains as large a percentage of protein digesting and no more acid forming bacteria than does pasteurized milk The cleanliness necessary to produce certified milk is so imperative and the variation in the production and pasteurization of ordinary market milk is so marked, that certified and pasteurized milks are most variable Inspected milk is apparently more uniform in numbers and kinds of bacteria

47 **Milk Streptococci.**—Streptococci, virulent for animals, but which differ from typical *Streptococcus pyogenes* in a more abundant growth, in being encapsulated and not forming chains and in causing but little hemolysis, Rosenow says occur in predominating numbers in epidemic sore throat of milk borne origin On artificial cultivation these strains sooner or later assume the characteristics of *Streptococcus pyogenes* By placing *Streptococcus pyogenes* in unheated milk it becomes modified so as to correspond to the streptococci in epidemic sore throat The modifications may be accentuated by passage through guinea pigs, and in some cases cultures like those of streptococcus mucosus may result The fact that milk so modifies streptococci is an additional indication of the important part it may play in epidemic sore throat It is not possible to determine whether the streptococci in such epidemics are of exclusively bovine or human origin, they may be of both Milk drawn in a sterile way from normal cows may contain virulent streptococci and pneumococci, hence, "certified milk," while surely less contaminated than ordinary milk, may contain pathogenic bacteria, and the advisability of pasteurization even in this case should be considered, especially during seasons when sore throat is common Butter and cream may contain virulent streptococci

48 **Antibodies in Colostrum and Milk.**—From her experiments, Tunnicliff concludes that normal human colostrum milk contains more opsonins for the streptococcus, staphylococcus and tubercle bacillus than does the later milk, but less than the blood serum Since this is true, it would seem of great importance that the newly born infant should receive colostrum milk

49 **Biochemistry of Tuberculosis** —The authors' systematic consideration of the chemotherapy of tuberculosis rests on an investigation of the permeability of both the tubercle bacillus and the tuberculous lesion for chemical substances of different characters It is shown that compounds of iodin injected into tuberculous animals enter glandular tubercles with readiness, so that the proportion of iodin in such tubercles is usually greater than it is in most other tissues except the kidney, furthermore it is greater in the caseous contents than in the cellular peripheries of the tubercles Tuberculous eyes usually contain much more iodin than their normal mates This property is shown not to depend on any specific character of the tubercle itself, for other necrotic tissues also take up more iodin than normal tissues The explanation offered is that normal cells are not perfectly permeable to iodids (except perhaps kidney cells) and lose this impermeability or semi permeability when killed or injured thus becoming entirely permeable for crystalloids present in the surrounding fluids As the iodin content of the blood increases and decreases with absorption and elimination, so the iodin in the necrotic area, whether tuberculous or otherwise, varies, indicating an absence of any chemical or physical binding of the iodin in such areas A simple, inert, colloid agar, implanted in the tissues, behaves in quite the same way Egg albumin injected into tuberculous pigs is found, by means of the anaphylaxis reaction, to penetrate the avascular tubercules but little if at all, even when present in the blood in large amounts This agrees with the hypothesis that the passage of iodin from the blood into the tubercles is a purely physical matter, the crystalloidal iodin compounds diffusing through the inert colloidal solution of a necrotic area practically unimpeded, while the colloidal egg albumin, according to the law of colloidal diffusion, is practically unable to diffuse through such a colloidal solution No evidence could be found of any tendency for iodin compounds of whatever nature to accumulate in tubercles or other necrotic areas, or to persist in such areas when disappearing from the normal tissues and the blood

50 **Tuberculous Guinea Pigs and Fat-Soluble Dyes** —Fat dyes administered by Corper under various conditions to guinea pigs with tuberculosis never were found within the tubercles This is in favor of the view that the fats of the tubercle are derived from the intracellular fats of the tissues forming the tubercle, and not from food fats or transported depot fats Tubercle bacilli within tubercles in such animals do not become stained with the fat stains Saturation of the animal with common fat dyes has no noticeable influence on the course of a tuberculous infection in the guinea pig The fat stains employed in these experiments (Sudan III, scarlet R, Sudan yellow Sudan brown, Nile blue sulfate) were never found to stain any but depot fats, not being present in the parenchymatous cells whether normal or diseased They caused no apparent harm to the guinea pigs even after being fed to them over 200 days Subcutaneous or intraperitoneal injection of fat dyes dissolved in fats and oils is much less effective in staining the depot fats, than is feeding the stained fats Fat dyes do not pass through the guinea pig placenta to the fetus, or at least the fat of embryo pigs from stained mothers is not stained (corroborating the result of the Gages, Mendel and Daniels) The embryos often show extremely fatty but unstained livers Fat dyes were never observed to pass into the milk of lactating guinea pigs, although positive results have been obtained by others

52 **Antirabic Immunity** —Harris' experiments seem to show that it is comparatively easy to immunize rabbits against rabies by a single intraspinal injection of non infective desiccated "virus," and that the resulting immunity is acquired with surprising rapidity, and is not followed by any ill results

55 **Oxidizing Agents and Phagocytosis** —Sodium iodoxybenzoate, which contains 11 43 per cent of physiologically active oxygen, Arkin found, has a markedly stimulating action on the phagocytosis of streptococcus and staphylococcus by human leukocytes in the presence of human serum, *in vitro* Sodium iodbenzoate, which contains no oxygen, has no such effect This stimulating effect on phagocytosis is related to its germicidal action, which is also dependent on the oxygen combined with the iodin in the molecule Arkin ventures to express the opinion that the opsonin of the serum is probably rendered more active by the oxygen containing substance, for the stimulating effect is exerted only in the presence of serum Therefore, sodium iodoxybenzoate may be of value in some infections because of its stimulating effect on the production of antibodies and on phagocytosis, as well as its bactericidal action Furthermore, a relationship is suggested between oxidation and the process of phagocytosis, for a substance which liberates oxygen readily stimulates phagocytosis, whereas a substance which prevents oxidation reduces phagocytosis

60 **Intraleukocytic Bodies in Scarlet Fever** —Glomset claims that bodies in the leukocytes like those described by Döhle occur in many febrile diseases, and in smaller numbers in other diseases, and even in health The larger part of these bodies are of nuclear origin, and may be produced by shaking the blood. He does not believe that it is justifiable to regard them as having any etiologic significance

62 **Toxic Substances from Pneumonic Lungs** —The action of the toxic substances obtainable from pneumococci and pneumococcus exudates on the blood pressure and respiration in normal dogs is said by the authors to be identical and strikingly like that which is observed in immediate anaphylaxis in dogs Pneumococcus anaphylaxis in dogs does not essentially differ from protein anaphylaxis in general The lesions are also similar The hemorrhages, the effect on the respiration

the extreme grade of cyanosis, especially in the fatal cases, the delayed coagulation of the blood and the presence of carbon dioxid in the stomach indicate that one of the chief effects of the toxic substances is an interference with the normal oxidative processes The toxic substances concerned are probably of the same general nature because the lesions and the effect on the circulation and respiration are so similar, and it makes no essential difference whether they are formed *in vitro*, in the consolidated lung in man, at once in sensitized dogs, or at a later period in normal dogs

Kentucky Medical Journal, Bowling Green

November 1 X, No 21 pp 833 852

63 Medicine and the Profession in Kentucky O Hancock Henderson
64 Tuberculosis Work in Europe J W Pettit Ottawa Ill
65 Constipation J C McCreary Cave City
66 Rheumatism in Children J F Dunn Arlington

November 15, X No 22 pp 853 884

67 Use of Rheumatism Phylacogen in Chronic Rheumatism E. B Richey Louisville
68 Treatment of Erysipelas with Phylacogens. W A Jenkins Louisville
69 Mixed Infection Phylacogen E S Allen Louisville

Medical Record, New York

December 7 LXXXII No 23, pp 1017 1062

70 Sanitary Conquest of Philippines L. M Maus U S Army
71 Chest and Abdominal Measurements in Relation to Build F S Weisse New York
72 Appendicitis in Infancy and Early Childhood C G Cumston Boston
73 After Treatment of Syphilis E G Ballenger and O F Elder Atlanta Ga
74 Le Charlatanisme de L Exactitude W B Konkle Montoursville Pa
75 Paralysis of Right Recurrent Laryngeal Nerve from Accidental Trauma D B Delavan New York
76 Case of Acute Bulbar Palsy with Autopsy and Histologic Findings Type Anterior Poliomyelitis A Wiener New York
77 Psoriasis a Neurosis W P Cunningham New York

New Mexico Medical Journal, Las Cruces

November IX No 2 pp 31 50

78 Medicophysicolegal Question C F Beeson Roswell
79 An Ideal Medical Practice Act. H B Kauffman Albuquerque
80 Dilatation of Stomach F D Garratt El Paso Texas
81 Ileus J H Wroth Albuquerque

New York Medical Journal

December 7 XCVI No 23 pp 1153 1204

82 Tendencies of Modern Physiologic Discipline in Medical Schools. J C Hemmeter Baltimore
83 Spinal Ataxia in Aged C W Burr Philadelphia
84 Ocular Manifestations of Angiosclerosis D F Harbridge, Philadelphia
85 Newer Teachings of Diseases of Alimentary Canal M I Knapp New York
86 Gonorrheal Arthritis. G A. Holliday Pittsburgh
87 Residual Ear D C Yates New York.
88 Intestinal Obstruction and Volvulus Complicating Pregnancy M A. Flower New York
89 Relations Between Doctor and Patient. H Rabinowitsch New York
90 Education and Training of Feeble-Minded Children in Public Schools A W Edson New York

Ophthalmic Record, Chicago

November XXI No 11 pp 577 638

91 Case of Juvenile Form of Family Amaurotic Idiocy H Gifford Omaha Neb
92 Modification of Prince Advancement Forceps F Allport Chicago

Pennsylvania Medical Journal, Athens

November, XVI No 2 pp 85 170

93 *Physiology of Heart C C Guthrie Pittsburgh
94 Instruments of Precision H G Schleiter Pittsburgh.
95 *Auricular Fibrillation J E Talley Philadelphia
96 *Infectious Febrile Heart. G W Norris Philadelphia
97 *Digitalis M H Fussell Philadelphia.
98 History of Digitalis J W Boyce Pittsburgh
99 Present Status of Cataract Operation S D Risley Philadelphia
100 Present Status of Arsenic Treatment of Syphilis E Martin Philadelphia
101 *Medical Expert Testimony from Legal Standpoint F F Kane Philadelphia
102 *Medical Expert Testimony from Medical Standpoint. E X Dercum Philadelphia
103 Cervical Adenitis with Special Reference to Roentgen Ray Method of Treatment G M Dorrance Philadelphia

93, 95, 96, 97, 101 and 102 Abstracted in THE JOURNAL, October 26, pp 1565 and 1566

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

November 23 II No 2708 pp 1429 1504

1 *Avenues of Rheumatic Infection Based on Examination of Seventy Five Cases of Sydenham s Chorea W P S Branson
2 *Possible Test in Differentiation Between Human and Bovine Types of Tubercle Bacillus J Fraser
3 Soil and Seed in Tuberculosis H Sutherland
4 Rat Bite Fever with Report of Case R W Cruickshank
5 Ruling Habit Strong in Death C H W Parkinson
6 Diagnosis and Treatment of Compression Paraplegia E S Reynolds
7 Tumor of Anterior Part of Corpus Callosum Extending Into Left Frontal Lobe Motor Apraxia J M Clarke
8 Nature and Treatment of Epilepsy W Alexander
9 Use of Brain Extract in Treatment of Various Forms of Insanity W M Smith
10 Results of Wassermann Reaction in 150 Cases of Mental Disease D Nabarro
11 Nature of Dementia Praecox I McKenzie
12 Reeducation of Attentive Control H C Miller
13 Nuclei of Neutrophil Cell in Acute Insanity C McDowall
14 Operation for Webbed Fingers A H Tubby
15 Some Principles in Treatment of Lateral Curvature of Spine by Exercise J S Smith
16 Psychasthenia A T Schofield and R M Leslie

1 **Avenues of Rheumatic Infection** —Sydenham's chorea and rheumatic fever in Branson's opinion are due to one and the same infecting agent The action of the rheumatic poison on a specifically predisposed central nervous system, he says, produces a characteristic nervous instability which may precede the appearance of choreic movements by some weeks, and may in other cases itself constitute the sole evidence of the choreic tendency, the phase of movements never becoming developed at all The emergence of choreic movements is determined by emotional stimuli acting on a central nervous system thus previously disequilibrated. The commonest avenue of rheumatic infection is the tonsil and next to it the nose The first essential of rational treatment, of rheumatic infection is restoration *of the upper air passages to a healthy condition Irrigation* and thorough cleansing of the nasal passages, combined with antiseptic treatment of the nose and pharynx, should be a routine item of antirheumatic treatment, and the operation of enucleation should be performed without delay on all rheumatic children who exhibit chronic enlargement of the tonsils or of the tonsillar lymphatic glands Chorea is a common sequel of scarlet fever, but the appearance of movements is usually postponed until the patient has left the fever hospital

2 **Human and Bovine Tuberculosis** —The most reliable test which we possess in the process of differentiation between human and bovine tubercle bacilli is the inoculation of certain animals (most commonly the rabbit or the calf) with a small known quantity of the organism under investigation If the infection results in a rapid dissemination of the disease and the speedy death of the animal, Fraser says it may be affirmed that the bovine bacillus is the organism present If on the other hand, the resulting lesions are few and tending to be retrogressive and death ensues after a very considerable interval of time, or from some intercurrent disease, the infection may be classified as human A distinction can be drawn between human and bovine bacilli by the local reaction, as well as by the general reaction produced in these animals The difficulty lies in appreciating the degree of local reaction

Fraser has found that the ideal situation in which to demonstrate such is the synovial membrane and more especially the synovial membrane of the knee joint of the rabbit By the degree of reaction, clinical and pathologic consequent on inoculation of the joint with a small quantity of bacillary emulsion he can differentiate between the human and the bovine types of tubercle bacilli The test is best demonstrated when an emulsion of the bacilli is injected into the part, but it may be carried out with pus or other pathogenic fluid it is essential, however, that no mixed infection be present The sequelae are distinct If the human bacillus is introduced there are few resulting changes the synovial membrane becomes slightly thickened, [illegible] is [illegible] excess of fluid in the joint, there is no [illegible] no joint the animal continues to [illegible] onsta the joint is examined [illegible] is to be a chronic synovial tubercle It is rare to find any degree of disease in the bones or articular cartilages or throughout the body When, on the other hand, the bovine bacillus is injected, the changes are rapid and acute About ten days after inoculation the animal becomes crippled, the joint becomes swollen and painful, the limb takes up a permanently flexed position, there is a progressive and continuous loss of weight Examination of the joint three to four weeks after inoculation shows the presence of acute synovial tubercle, the interior of the joint is full of caseous debris, the articular cartilages are eroded, there are foci in the neighboring bones and throughout the bod the lungs, spleen and kidneys are diseased The results of fifteen applications of the test are given

Journal of Obstetrics and Gynecology of British Empire, London

October XXII, No 4, pp 191 244

17 *Gelatinous Glandular Cysts of Ovary and So-Called Pseudomyxoma of Peritoneum T Wilson
18 Artificial Feeding of Small and Premature Infants J Wyatt
19 Traumatic Rupture of Uterus with Prolapse of Intestines Into Vagina Followed by Chronic Intestinal Obstruction Operations Recovery C Noon
20 Dermoid Tumor of Both Fallopian Tubes J N Stark
21 *Case in Which Torsion of a Hydatid of Morgagni During Pregnancy Without Torsion of Tube or Ovary, Caused Urgent Symptoms H R. Andrews

17 **Pseudomyxoma Peritonei**—Wilson has met with six typical cases of pseudomyxoma of the peritoneum To the end of 1911 he had operated on 331 patients with tumors of the ovary, among which were included 144 glandular pseudomucinous cysts In addition to the six cases of typical pseudomyxoma there have been among the 144 glandular cysts five others in which the contents have been gelatinous, although there has been no extensive effusion into the peritoneal cavity There was a marked difference from the class of patient in whom pseudomyxomatous peritonitis was found In most of the cases a certain quantity usually small, of free soapy exudation was present in the peritoneum, although no rupture or perforation of the cyst could be made out One of the cases is of peculiar interest, in that after removal of a right sided cyst, a second one grew in the left ovary to the weight of three pounds within five months, the left ovary had been observed at the first operation to be shriveled and senile in appearance The second cyst had burst, discharging a large quantity of mucoid fluid into the peritoneal cavity Both cysts were proved by the microscope to be simple glandular in structure This case was further of interest in that the patient had a fibromyoma and later developed carcinoma of the body of the uterus, of which the first symptom appeared within a year of the second ovariotomy, the patient dying about six years later The removal of the two ovaries caused regression of the fibroid, but did not prevent the subsequent malignant development in the uterus an important condemnation of the operation of double oöphorectomy for uterine fibroid

21 **Torsion of Hydatid of Morgagni.**—Tenderness just above and internal to the right anterior superior spine, pain and abdomen distention were the subjective symptoms in Andrew's case On opening the abdomen and exploring the right iliac fossa a small purple body came into view, which was at first thought to be a gangrenous appendix, but was found to be attached to the fimbriated extremity of the right fallopian tube It was about 2 inches long, ¾ of an inch thick and was constricted in the middle of its length It had the appearance of being some soft structure which had become deeply congested and then become practically solid as the result of thrombosis The tube ovary and appendix were healthy and normal The small purple body was removed after its attachment to the fimbriated extremity of the fallopian tube had been ligatured with catgut Nothing abnormal was found in the abdomen except that the uterine wall appeared to be very thin Under the microscope the piece of tissue was found to consist of a thin walled cyst with some lymph on its surface the interior filled up with blood-clot It was apparently a twisted hydatid of Morgagni, which could not have been larger than a small grape before torsion occurred

Lancet, London

November 23, II No 4656 pp 1415 1484

22 *Cardiovascular System in Pulmonary Tuberculosis R D Powell
23 Clinical Significance of Different Forms of Regular Tachycardia. T Lewis
24 Occurrence of Cholera Vibrio in Biliary Passages E D W Greig
25 Major Leonard Roger's Method of Treatment of Asiatic Cholera J W D Megaw
26 Erythremia J Parkinson
27 Varieties and Treatment of Lateral Curvature of Spine R. C Elmslie
28 Purpura Fulminans J A M Cameron
29 *Jejunostomy in Combination with Anterior Gastro Enterostomy in Treatment of Chronic Gastric Ulcer E T Tatlow
30 Dangers of Electricity from Clinical Forensic and Hygienic Points of View S Jellinek

22 **Pulmonary Tuberculosis**—In Powell's opinion consumptives on the whole have a much better circulation than they are given credit for, their hearts are relatively good, and a low blood pressure in them is mainly attributable to depressed cardiac function from excessive absorption of bacterial products It is very rare, even in acute cases, to meet with anything approaching the heart failure so often observed in enteric fever or diphtheria, although it may be witnessed after excessive doses of tuberculin In some cases of advanced but quiescent phthisis one meets with great irritability of the heart, with attacks of palpitation or disturbed action easily provoked by exertion, emotion, or dyspepsia, disturbances attended with great distress, sometimes with almost anginal suffering These, Powell says, are cases of one sided disease, usually the left side, in which the lung has become extremely damaged, with considerable cavitation, and has then in the healing process become fibroid and contracted, with dense thickening of the pleura The margin of the lung recedes from the surface of the heart, leaving the pericardium exposed directly beneath the flattened chest wall The chest wall is drawn in, the diaphragm drawn up, the heart, displaced to the left and upward, is closely surrounded on three sides by dense unyielding structures, while the opposite healthy lung is compensatorily enlarged and extends beyond the median line In right sided cases the heart assumes a more vertical position than natural, and is drawn to the right and upwards The heart is thus cramped on all sides in a restricted chamber with rigid parietes, instead of being surrounded by resilient structures whose peripheral influence is aspiratory to its cavities

The marginal zone surrounding the tuberculous caseous center of a tubercle contains tubercle bacilli which are active or sluggish according to the activity of the disease In chronic and quiescent cases they are still there, secreting toxins in a more or less languid manner, and an area of bacillary infiltration surrounding each focus may thus be regarded as charged with stagnant bacterial products which may not get at all into the general circulation, or so gradually and in such small quantities as to cause little or no constitutional disturbance But if in such patients one replaces quietude by activity, or moderate activity by harder labor, two things are accomplished (1) the circulatory activity and blood pressure in these perifocal zones is raised, hastening the blood-currents and the lymph streams, and so bring about increased absorption of the bacillary products and (2) increased disturbance in these areas is further caused by increased movement of the lungs from the hurried breathing It is by these mechanisms combined, but principally the vascular disturbance, that auto inoculation is brought about in tuberculosis and it was after this fashion that Paterson explained what he had previously found by careful observation, that by graduated labor in the sanatorium at Frimley he could bring about certain regulated degrees of auto inoculation, and so obtain gradual immunity in tuberculosis by progressive stimulation of phagocytic action and of other agencies antagonistic to the bacillus

29 **Jejunostomy in Chronic Gastric Ulcer**—The following are the steps of the procedure carried out by Tatlow The stomach is clamped as in the ordinary operation, a loop of 18 inches of jejunum is then picked up and an anterior vertical anastomosis performed. The proximal loop of jejunum is then divided near the anastomosis and implanted into the portion of the jejunum leaving the gastro-enterostomy, the distal cut end near the anastomosis being first closed, thus completing

the modified anterior gastro enterostomy in Y The loop of jejunum coming from the duodeno jejunal flexure to form one limb of the Y is now taken, and at a point two or three inches above the Y, on the side of bowel remote from the mesentery, a small longitudinal incision is made into the lumen of the gut, and a No 14 rubber catheter is introduced. This is fixed in position by a 000 catgut suture, taking in all the coats of the bowel and the catheter, which is then passed well down into the jejunum beyond the anastomosis Then a series of interrupted Pagenstecher sutures is used so as to enfold the catheter in a trough of jejunum as in a Witzel gastrostomy, care being taken not to stenose the anastomosis The line of suture is then fixed to the anterior abdominal wall by a single stitch at each end, and the abdominal wound is closed tightly round the catheter, which projects about 5 or 6 inches

Quarterly Journal of Medicine, London

October VI No 21 pp 1 124

31 *Catarrhal Jaundice Sporadic and Epidemic and Its Relation to Acute Yellow Atrophy of Liver E A Cockayne
32 *Action of Diastase in Diabetes Mellitus O T Williams and P M Powell
33 *Action of Vagus on Human Heart W T Ritchie
34 *Investigations on Gastric Juice in Malignant Diseases of Stomach and Duodenum S B Schryver and C Singer
35 *Influence of High Temperature on Protein Metabolism with *Reference to Fever G Graham and E P Poulton*

31 **Catarrhal Jaundice, Sporadic and Epidemic**—Most epidemics of jaundice, in which the possibility of yellow fever, relapsing fever, and malaria have been excluded, according to Cockayne, are due to infectious jaundice or epidemic catarrhal jaundice Infectious jaundice or Weil's disease is in all probability due to the ingestion of contaminated water or food, but may be due to some biting insect Epidemic catarrhal jaundice is air borne Epidemic catarrhal jaundice is much the commoner disease and is of almost world wide distribution, infectious jaundice is met with chiefly round the Mediterranean Sea, and does not extend to the British Isles Simple catarrhal jaundice, usually attributed to gastro duodenal catarrh, of varying origin, is the sporadic or endemic form of epidemic catarrhal jaundice, except in a comparatively small number of cases Acute yellow atrophy of the liver in the great majority of instances is due to the same organism acting on a liver weakened by some temporary strain, such as pregnancy, or having some inherent weakness A similar condition may be produced by syphilis, infectious jaundice, and other infections, but much less often Sporadic and epidemic catarrhal jaundice and acute yellow atrophy of the liver are due in the great majority of cases to the same cause, a specific organism of unknown nature

32 **Action of Diastase in Diabetes Mellitus.**—In the prolonged daily study of cases of diabetes treated with diastase Williams and Powell have been unable to observe any beneficial effects which could be attributed to it In cases which responded markedly to a course of oatmeal given as advocated by von Noorden, no such effect can be obtained by any preparation of diastase they used If there is any specific body in oatmeal which has an effect on carbohydrate metabolism, they are convinced that it is not a diastase ferment.

33 **Action of Vagus on Human Heart**—The action of the vagi on the human heart, Ritchie says, is closely comparable to that of the vagi on the heart of other mammals Compression of the right vagus may depress the rate and strength of the auricular beats, may prolong auricular systole, and may depress the conductivity of the auriculo ventricular bundle system The inhibitory effects of the vagus on the human auricles ensue gradually, and usually pass off gradually while the compression is still being maintained Compression of the right vagus has not depressed the excitability of the human auricular muscle when in fibrillar contraction or in flutter Depression of conductivity is probably an important factor in the production of fibrillation in the human heart In three cases of complete auriculo ventricular dissociation the vagi had no apparent influence on the ventricles In hearts with a normal rhythm and good conductivity in the auriculo ventricular bundle system, vagus compression may depress the rate and contractility of the ventricles, and less frequently may prolong the duration of ventricular systole The depression of ventricular rate is usually proportionate to the degree of auricular retardation In some instances the auricles escape from vagus inhibition before the ventricles, in others ventricular standstill may perhaps terminate by the occurrence of idioventricular contractions Extra systoles may occur during the escape of the heart from vagus inhibition The inhibitory effects of left vagus compression are as a rule less effective than those of right vagus compression, and the latter are almost uniformly the reverse of those induced by atropin

34 **Gastric Juice in Malignant and Non Malignant Diseases**—The authors found that in about 6½ per cent of cases of grave gastric disorder a ferment is present in the gastric juice capable of hydrolysing Witte's peptone This abnormal ferment is of unknown origin Apparently, however, it is derived neither from the duodenal secretion nor from the saliva, but from the stomach itself It has been detected only in cases with severe dyspeptic symptoms The gastric juices in which the ferment has been detected have been uniformly characterized by their poor hydrochloric acid content and low or absent peptic power In most of the cases, moreover, an extremely low gastric secretory power has been suggested by the small amount of chlorids present The abnormal ferment is neither peculiar to nor characteristic of gastric carcinoma In the majority of cases in which carcinoma was undoubtedly present the peptolytic ferment was absent The commonest condition associated with the ferment appears to be gastric dilatation with atrophy of the walls of the stomach and thinning of the mucous membrane This condition was present in at least seven of thirteen cases and in two that came to post mortem

35 **Influence of Temperature on Protein Metabolism**—A rise of body temperature to 104 3 F (40 2 C) did not, in the authors' experiments, by itself cause any breakdown of the proteins of the body If a diet of very high calorie value is taken, which contains a large excess of carbohydrate but a minimal quantity of protein, non nitrogenous substances supply the whole of the increased energy production set up by the high temperature If a diet of ample caloric value is taken, which contains practically no carbohydrates but a large excess of protein, the fat metabolism is increased, but it is probable that the protein metabolism also takes a small share in the increased energy production set up by the high temperature If a diet of insufficient calorie value is taken, which contains practically no carbohydrates but a fair amount of protein, the fat metabolism is probably greatly increased, but the protein *metabolism takes no share in the increased energy production* set up by the high temperature

Annales de Médecine et Chirurgie Infantiles, Paris

October 15, XVI No 20 pp 609 640

36 *Anemia of Alimentary Origin A Czerny

November 1 No 21 pp 641 672

37 Anemia in Infants L Tixier Commenced in No 20

36 **Anemia of Alimentary Origin in Infants**—Summarized in the Paris Letter, Nov 30, 1912, p 1986

Archives des Maladies de l'App Digestif, Paris

October VI, No 10 pp 541 600

38 Liver Abscess in Amebic Dysentery (Les abcès du foie dans la dysentérie amibienne autochtone) A Cade L Thevenot and Roubier
39 Serodiagnosis of Gastric Cancer (Le diagnostic biologique du cancer de l'estomac par les méthodes récentes) L Enriquez and M P Weil

Archives de Médecine des Enfants, Paris

November XI No 11, pp 801 880

40 Marbling of the Skin in Children (La livedo chez les enfants) J Comby
41 Urea in the Cerebrospinal Fluid in Infants Nobécourt Sévestre and Bidot

Bulletin de l'Académie de Médecine, Paris

Novem [illegible] *o 37 pp 3,7 76*

42 Direct Tra [illegible] r Hemorrhage [illegible] tric Ulcer [illegible] ilbaut
43 Orthop [illegible] n diffo [illegible] p d

Journal de Chirurgie, Paris

September, IX No 3, pp 273 428

44 *The Thymus in Exophthalmic Goiter (Le thymus des basedowiens) C Lenormant

44 **The Thymus in Exophthalmic Goiter**—Lenormant does not agree with those who regard hypertrophy of the thymus as in itself a special danger in exophthalmic goiter The thymus is frequently unduly large in all forms of exophthalmic goiter, but this is not a constant occurrence When hypertrophy of the thymus is associated with hypoplasia of the adrenals, the resulting instability of the cardiovascular system may be a dangerous feature of the clinical picture The general principles for operative treatment of exophthalmic goiter need not be modified on discovery of hypertrophy of the thymus The thymus is of far less importance than the thyroid from every point of view in exophthalmic goiter

Journal de Médecine de Bordeaux

October 20 XLII No 42, pp 661 676

45 Chronic Adrenal Insufficiency Three Cases. (Maladie d Addison) C Mongour

October 27 No 43 pp 677 692

46 Retro Uterine Hematocele from Rupture of Ovarian Hematoma A Charrier

47 *Congenital Varices C Boisse

47 **Congenital Varices**—One of the patients was an infant, the other a girl of 18 The congenital dilatation of the veins in the latter case had grown more pronounced in time and finally induced pain as actual small angiomatous tumors developed The right leg was involved and an elastic stocking kept the condition stationary The infant's trouble was more a diffuse angioma of the entire right arm

Lyon Médical, Paris

November 10 XLIV No 45 pp 761 808

48 Estimation of Arterial Pressure (Pression systolique oscillatoire ou palpatoire) L Gallavardin

Presse Médicale, Paris

November 9 XX No 92 pp 929 940

49 Neurotomy to Relieve Pain in Laryngeal Tuberculosis (La neurotomie du nerf laryngé supérieur dans la dysphagie des tuberculeux.) A Challier and P Bonnet.

50 Ozena and Tuberculosis R Leroux

November 16, No 94 pp 940 960

51 Polyuria with Chronic Nephritis (La polyurie paradoxale de la néphrite interstitielle diagnostic de la sclérose rénale) A Martinet

Semaine Médicale, Paris

November 20, XXXII No 47 pp 553 564

52 Excessive Tonus of the Vagus System (La vagotonie) L Cheinisse

Archiv für klinische Chirurgie, Berlin

XCIX No 3 pp 507 877 Last indexed November 9 p 1761

53 *Resection of Cancerous Stomach. (Mittheilung zur Technik der Magenresection beim Carcinom) G Kelling

54 Operative Treatment of Fractures E W H Groves

55 *Operative Treatment of Elephantiasis (Lymphangioplastik bei Elephantiasis) W N Rosanow

56 Fracture of Distal End of Tibia (Ueber Absprengungsfracturen am vorderen und hinteren Abschnitt des distalen Endes der Tibia mit Berücksichtigung der Rissfracturen) S König

57 *Operative Treatment of Ankylosis of the Knee. (Operative Behandlung von Kniegelenksankylosen) E Payr (Experimentelle Beiträge zu operativen Mobilisirung ankylosirter Gelenke) M Sumita

58 Causes of Recurrence After Operative Treatment of Inguinal Hernia (Ursachen der Recidive nach Radicaloperation des *Leistenbruches) E Polya*

53 **Resection of Cancerous Stomach**—Kelling has long been preaching that the experiences to date show that infection of the tissues around from the infectious contents of the cancerous stomach is by far the most important factor in development of complications afterward whether they take the form of pneumonia, sepsis, peritonitis or tearing out of the sutures Progress therefore must be along the lines of preventing this operative infection He refrains from taking any suture in the mucosa and summarizes seventy two cases in which he applied the technic he advocates Eleven patients succumbed to the results of the operative infection and in two thirds of these the stomach wall proved to be too friable to hold the button In most of these infectious cases the cancer was unusually high in the fundus and the whole stomach high and inaccessible behind the ribs so that compresses did not work well The unusual friability of the stomach walls is probably the result of arteriosclerosis, and he is inclined to regard this as a predisposing factor for gastric cancer In the four cases of fatal infection after a clean operation, the probable source for it was in some adjacent lymph nodes sheltering virulent bacteria, and this possibility should be borne in mind in debating whether to remove them or not About 42 per cent of the patients operated on before 1910 have developed recurrence, but fourteen are in good health for two or more years Small carcinomas developing in a callous ulcer offer the best prospects for a permanent cure, but the ultimate outcome depends after all on the patient's resisting powers He has found that conditions guarantee better nourishment when the gastroenterostomy is supplemented by an entero anastomosis, as he describes in detail He does not approve of operating in two sittings unless the patient is too weak to stand the resection at once

55 **Treatment of Elephantiasis**—Rosanow reports a case in which he restored the patient to active life by a combination and modification of Lanz and Oppel's methods for diverting the course of the lymph by anastomosis between the superficial and deep lymphatics The photographs show the extreme improvement Diamond shaped patches of skin, 15 or 11 cm across, were cut out of the thigh and calf The subcutaneous tissue and aponeurosis were cut across on the short diameter of the diamond and then cut along one side line down to the muscle This produced two triangular flaps, each was turned over and pushed into the space below between the layers of the muscle separated for the purpose with a blunt instrument The flaps were held with a few catgut stitches in the muscles and periosteum The skin was drawn together and sutured along the long diameter of the diamond, thus exerting compression on the lymphatics below The results surpassed all anticipations

57 **Operative Treatment of Ankylosis of the Knee, Etc**—Sumita gives a long report of the experimental research on which Payr's operative treatment is based The principle of interposing a pedunculated flap of soft tissue can be applied not only in ankylosis of the jaws and elbow but also of the knee, restoring function in a manner unattainable by any other means The interposed flaps soon undergo a fibrous change and grow larger and develop into a kind of bursa which permits the joint to be used naturally Payr devotes seventy four pages and forty one illustrations to his experiences in this line He does not attempt the operation unless the patient is young, healthy and strong, with the extensor muscle apparatus still capable of some functioning, and the patient's will power guarantees active cooperation and he can spare the time necessary for the after treatment He has applied the method to three young women and a girl of 12 and to seven young men and one boy of 11 The ankylosis was of tuberculous or gonorrheal origin in two cases each In three cases a free auto flap of soft tissue was interposed, in the others a large flap from the fascia lata above was drawn down to hold the end of the femur in its loop The outcome was extremely satisfactory in eight cases and conditions will probably improve in all as time passes The interval since has been less than a year in all but two

Beiträge zur klinischen Chirurgie, Tübingen

October LXXX, No 3 pp 431 601

59 *Thymol for Sterilization of Mucosa During Operations (Zur Schnelldesinfektion der Schleimhaut bei Operationen mit Eröffnung des Magen Darmtractus) A. Hoffmann

60 Experimental Traumatic Hemorrhage in the Appendix R Rubesch and K Sugi

61 *Epidermoids of Unusual Location H Simon

62 Traumatic Epithelial Cysts F A Hesse

63 Spontaneous Healing of Acute Suppurative Liver Disease After Appendicitis N Hellström

64 Primary Cancer of Kidney Pelvis (Primäre epitheliale Neubildungen des Nierenbeckens) F Stüsser

65 Suture of Blood Vessels (Zur Technik der Gefässnaht) R Eden

59 **Sterilization of the Mucosa During Operations Exposing It**—Hoffmann refers particularly to rapid sterilization of the mucous membrane during operations on the stomach or intestines, and reports research on dogs which has demonstrated that a 5 per cent alcoholic solution of thymol is effectual in rapid sterilization of the skin and mucous membranes wherever

exposed After wiping the surface of the mucosa with a dry sponge as it is exposed in the stump of the stomach or intestine below where it is being held by a clamp, he dabs the mucosa with the 5 per cent thymol spirits, repeating the procedure with a second sponge after a few seconds This does not irritate the tissues while it practically sterilizes the mucosa, materially reducing the number of germs He warns against letting the thymol come unnecessarily in contact with the serosa as liable to invite adhesions, warning further that thymol irritates and entails necrosis when it is left too long in contact with living tissue, one minute, or two minutes at most, seemed to be the limit in his experiments on dogs With contact longer than this, the tissues always showed microscopic or visible signs of injury In applying the method to man, he never allows the thymol in contact for more than a few seconds He has been using this disinfectant in all kinds of operations during the last eighteen months and always with highly satisfactory results

61 **Epidermoid Cysts of Unusual Location.**—Simon has compiled from the records twenty five cases of epidermoid tumors on the toes, penis, arm, leg, ear, scalp, over the clavicle or on the buttocks or abdomen The cysts are liable to rupture and become infected as in the personal case described.

Centralblatt für die Grenzgebiete der Med und Chirurgie, Jena

November 9, XVI No 1 pp 1 36

66 *Bronchiectasia from Surgical Standpoint. E Batzdorff
67 *Partial Giant Growth.* (*Ueber den reinen partiellen Riesenwuchs.*) E Hahn

66 **Operative Treatment of Bronchiectasia.**—Batzdorff analyzes eighty nine publications on this subject, stating that in the fifty three cases of pneumotomy a cure was realized in only 9 4 per cent., 62 per cent of the patients died The principal reason for this unfavorable result was that the bronchiectasia was chronic and multiple, with numerous foci it is impossible to reach them all and operative treatment is of little use A good result may be anticipated only with a large bronchiectasia single cavity, obliteration of which may lead to a complete cure Mild operative measures are futile, resection of the lung seems to be the only effectual measure

Correspondenz Blatt für Schweizer Aerzte, Basel

November 10 XLII No 32 pp 1209 1256

68 Multilocular Echinococcus Cysts Three Cases E. Clerc.

Deutsche medizinische Wochenschrift, Berlin

November 14 XXXVIII No 46 pp 2153 2200

69 *Modern Surgery (Die Aufgaben der modernen Chirurgie) E. Sonnenburg
70 *Treatment of Pernicious Anemia (Kombinationstherapie bei perniziöser Anämie) L. Brieger
71 Electrocardiography and Its Interpretation (Zur Erklärung des Elektrokardiograms und seiner klinischen Verwertung) H E Hering
72 *Serodiagnosis of Pregnancy (Serodiagnostik der Schwangerschaft) E Abderhalden
73 Leukocyte Inclusions in Scarlet Fever (Ueber die Döhleschen Leukozyteneinschlüsse bei Scharlach) M Kretschmer
74 *Motor Functioning of the Stomach with Duodenal Ulcer S Kreuzfuchs
75 *Sunlight as Factor in Pellagra and Test Based Thereon (Zur Frage einer spezifisch diagnostischen Reaktion bei Pellagra.) H Raubitschek
76 *Indicator Method for Study of Urine (Verwendung der Indikatorenmethode beim Studium der Harnreaktion) G Quagliariello and E d Agostino
77 Spread of Diphtheria and Leprosy by Human Stools (Verbreitung der Diphtherie und Lepra durch die Faeces) E Delbanco
78 Serodiagnosis of Cancer (Serodiagnostik der Geschwülste mittels Komplementablenkungsreaktion nach v Dungern) J Lindenschatt
79 Training of Nurses for Sick Infants (Ausbildung von Säuglingskrankenpflegerinnen nach einheitlichen Grundsätzen) J Ibrahim

69 **Modern Surgery**—Sonnenburg remarks that the surgeon must no longer place his entire reliance on the knife but must utilize every possible means to aid the organism in its struggle against disease He must strive to avert all the injurious influence caused by and on account of the operation, to prevent the natural protective forces from becoming exhausted and the resistance enfeebled Complex disease processes can never be cured by exclusively operative measures The surgeons have receded a few steps in the last few years they no longer trephine idiots, etc, and only occasionally an epileptic, and they no longer expect to cure exophthalmic goiter by an operation on the sympathetic alone In ileus the mechanical factors have been too much regarded in the past and the functioning of the intestines too little Tuberculous processes in joints are operated on less and less

70 **Pernicious Anemia**—Brieger calls attention to the discovery of the frequently high antitrypsin content in the serum of persons with cancer and the remarkable effect of pancreatin in bringing the antitrypsin titer down to the normal figure, while the general health improved These and other experiences have suggested that there is a connection between the condition in regard to immunity and the condition in regard to protective ferments He found that diphtheria antitoxin contains increasing amounts of antitrypsin with increasing immunizing power—all of which confirms the importance of an unusually high antiferment content in exhausting diseases and the possibility of restoring conditions in this respect approximately to normal by pancreatin He has applied these principles in treatment of pernicious anemia, and reports three cases in which he gave Fowler's solution, by the usual dosage after meals and pancreatin before the meals The rapid improvement in all three patients under this combined treatment was remarkable neither alone proved effectual A permanent cure was not realized two of the patients dying later after they had given up treatment, but the third has been under supervision for three years, treatment is resumed whenever the blood findings show recurrence of alarming symptoms A striking feature of the cases was the rapid drop of the antitrypsin content of the blood to within the normal range He has had similar improvement, although of brief duration, in several cases of cancer He is now investigating to determine whether pancreatin will not prove a useful adjuvant in other affections It is possible that pancreatin may have catalytic powers in addition to its effect on the digestion and assimilation

72 **The Blood Test for Pregnancy**—Abderhalden here reviews the results of his research which were described in THE JOURNAL, Sept 14, 1912, p 881, and December 7, p 2073 The dialysis method and the optic method speedily distinguish the serum from gravid and non gravid women and animals Some of the experiences suggest that the placenta in different species of animals contains biologically identical or closely allied protective enzymes or ferments The methods described seem to open a field for research in several branches of pathology When the blood serum is mixed with the peptone derived from a placenta and the rotation of the plane of polarized light is determined, by this optic method it is possible to differentiate the serum from the gravid and the non gravid. In all his experience he never obtained a negative result with serum from pregnant women or animals He found that the findings became positive when placenta material was injected subcutaneously or intravenously even into a male The dialysis method is even simpler The placenta tissue is mixed with serum in a dialyzing tube and is suspended in a jar containing 20 c c of distilled water After sixteen hours' incubation, 10 c c of the dialysate is transferred to a test tube and tested for the products of proteolysis A positive color reaction shows that the serum has digested the placenta tissue Positive findings show that the serum comes from a person with a placenta but this does not tell whether there is a living fetus present or not If the reaction is positive and there has been recent uterine hemorrhage, even in the absence of other signs of pregnancy, an abortion is suggested. The 300 cases tested to date have not yet fully settled whether the reaction is specific for pregnancy alone The reaction generally grows weaker towards the end of the pregnancy and increases again during the puerperium It has not failed to date in any *instance of pregnancy* He urges clinicians in general to test the method and also to determine the action of the undiluted serum in different conditions on the plane of polarized light The serum can be utilized afterward for other tests In diabetes it might pro[illegible] [illegible]eful [illegible]t the rotatory action of the serum on diff[illegible] [illegible] that the rotatory action of the serum of [illegible] [illegible]ffered from that of the mother's [illegible] [illegible] cent [illegible]

examined displayed the same action on polarized light as the mother's serum This confirms the biologic independence of the maternal and fetal blood

74 **Hypermotility of the Stomach with Duodenal Ulcer**—Kreuzfuchs found that the motor functioning of the stomach differed according as the stomach was empty or not before the test bismuth was given Achylia and incipient cancer of the pylorus may present a radioscopic picture exactly like that of duodenal ulcer, so that the stomach content should be tested at the same time to avoid error Hyperchlorhydria plus the duodenal gastric motility testify strongly to duodenal ulcer

75 **Origin and Diagnosis of Pellagra**—Raubitschek presents a further array of arguments to sustain his view that pellagra is the result of a restricted diet supplemented by the injurious action of the sunlight It is thus a dietetic photodynamic disease, and in prophylaxis and treatment neither of these factors should be neglected

76 **Indicator Method Applied to Study of the Urine**—The changes in tint with the varying thickness of the fluid to be examined form the basis of Friedenthal's indicator method of studying various fluids The technic has been further elaborated and applied to the study of the urine, with considerable simplification of the original method It is commended as simple and practical, while the findings are said to be reliable.

Jahrbuch fur Kinderheilkunde, Berlin

November LVI No 5 pp 507 644

80 Experimental Research on Infantile Scorbutus (Moeller Barlowsche Krankheit) C Hart
81 *Duodenal Ulcer in Infants (Zur Diagnose und Pathogenese des Duodenalgeschwürs im Säuglingsalter) H Flesch
82 Softening of Entire Brain in Infant (Fall von totaler Erweichung beider Grosshirnhemisphären bei einem 5 Monate alten Kinde) E Meier
83 Displacement of Genital Organs in Little Girls (Dystopie der inneren Genitalien bei Mädchen im frühen Kindesalter) J Vas.
84 *Abdominal Purpura (Henoch) A Gara
85 Congenital Myatonia M Bernhardt.

81 **Duodenal Ulcer in Infancy**—In recent years duodenal ulcer has been reported much more frequently in proportion to gastric ulcer In infants a considerable number of cases has been reported Entz reported eleven cases in 364 autopsies at the Budapest Children's Hospital in 1908 The ages were from six weeks to six months It is seldom diagnosed during life Flesch gives the history of a case diagnosed during life from the profound anemia and bloody stools The child had been fed first milk and gruel, then the milk had been given up entirely The lack of salts and the inanition caused by the improper feeding led to injury and finally to autodigestion of the duodenal mucous membrane

84 **Henoch's Purpura**—Gara reports two cases from his own experience and cites from the literature seventeen, all in children The characteristic symptoms are the appearance of purpuric spots, pains in the joints, gastric and intestinal disturbances, with colic and vomiting He concludes from the necropsy findings that purpura abdominalis is frequently associated with intussusception, whether as cause or effect is still undetermined

Medizinische Klinik, Berlin

November 10 VIII No 45 pp 1816 1852

86 Traumatic Disease of Heart or Vessels. (Zur Begutachtung und Behandlung der traumatischen Herz und Gefässer krankungen) T Rumpf
87 Atony of the Prostate M Marcuse
88 Tuberculin Treatment in Tuberculosis (Erfahrungen und Gedanken über Tuberkulose und Tuberkulin) L. Heine Commenced in No 44
89 Pancreas Cysts C Decker
90 Local Application of Heat in Urogenital Disease Kyaw and O Simmonds
91 Acute Gout a Neuralgia or Neuritis (Pathogenese des akuten Gichtanfalls) A Adler
92 The Wassermann Reaction in Internal Medicine E. Steinitz
93 Action of Dyes in Combination with Poisons and Medicines (Wirkung der Farbstoffe in Verbindung mit Giften und Arzneimitteln) J Sellei

November 17 No 46, pp 1853 1892

94 *Early Diagnosis of Active Pulmonary Tuberculosis A Hoffmann
95 *Gynecology and Psychiatry J Peretti
96 Prophylaxis and Treatment of Puerperal Mastitis E Nohl
97 Necessity for Necropsy After Fatal Trauma in Patients with Heart Disease (Feststellung der Unfalltatsache durch die Obduktion bei Erkrankungen der Gefässe) L Feilchenfeld.
98 *Distant Reaction of Degeneration (Klinische Bedeutung der Fernreaktion auf Entartung von Ghilarducci) A Forli
99 *Treatment of Flat Foot (Plattfussbehandlung) J A. L Stephan
100 Powder Treatment of Vaginal Disease (Die Pulverbehandlung beim Aussfluss aus der Scheide) M Nassauer
101 Recent Research on Heredity (Die neueren Forschungen auf dem Gebiete der Descendenztheorie) A Jacobsohn
102 *Minor Practical Points (Praktische Winke) R Mewerth

94 **Early Diagnosis of Pulmonary Tuberculosis**—Hoffmann is in charge of the observation station with eighteen beds to which candidates for the public sanatoriums are referred for selection of the cases promising recovery under institutional care During the last year 500 patients were thus examined The outcome of the cases is compared with the presumptive diagnosis made in the observation station He has found percussion of the apices of little use for detection of incipient tuberculosis, as also the finer modifications in the breathing sounds To avoid disturbing muscle sounds, he gives the patient the evening before 1 gm sodium iodid and a sedative, sometimes repeating the sedative early the next morning The skin and eye tuberculin tests are useless in adults, but radiography is of the greatest help In many cases in which the clinical examination was dubious, the radiograms settled the question for or against tuberculosis Of his 700 roentgen ray plates, 200 were examined for disease on both sides, and it was found bilateral in 114, in all some connection with the hilus was evident The foci are not always at the apex, but may spread sideways from the hilus in triangular shape. This connection with the hilus is an important aid in dubious cases Radiography was of the least use in cases with initial hemoptysis Other cases of tuberculosis in the family were known in only 18 per cent of the total material Pains in the back, chest, side, abdomen or sacral region were more common than cough in the patients examined Among those who proved not to be tuberculous—although sent in with this diagnosis—were some with diabetes, nephritis, tapeworm or cervical ribs, and 15 per cent of them had acute bronchitis, others were debilitated from defective food or alcoholism His experiences show that it is impossible to diagnose or exclude incipient pulmonary tuberculosis by office examination. Photograph records of the roentgen ray findings are indispensable, he thinks, and reexamination after two and four months on a presumptive negative diagnosis Another point emphasized by his experience is that pulmonary tuberculosis often reaches an advanced stage without the patient having ever consulted a physician

95 **Gynecology and Psychiatry**—Peretti protests energetically against Bossi's demand that women with mental disease should be sent first to a gynecologic clinic and gynecologic morbid conditions corrected before being taken to the insane asylum He presents a number of arguments to show the inadvisability of such a measure He has had a number of patients in the institution in his charge in which the mental disease was not modified by thorough gynecologic treatment

98 **The Distant Reaction of Degeneration**—Forli calls attention anew to Ghilarducci's distant reaction, that is, placing the electrodes at a distance from the muscle to be tested, in such a way that the muscle lies between the poles A distinct contraction can be felt in the muscle when the current is closed He reports three cases to show the value of this reaction, both in diagnosis and prognosis Hope need not be given up as long as this distant reaction occurs, even when all other electric tests give a negative response

99 **Treatment of Flat-Foot**—Stephan uses a kind of stilt to bring the bones of the foot into proper position It differs from ordinary stilts only in that the foot piece rests on the floor, and slopes upward to its outer edge, so that the scaphoid bone is raised, thus restoring the arch of the foot The foot is placed in the stilt with its outer edge against the shaft He has his patients walk with the stilt once or twice a day in their room until the bones stay in the proper position Children with flat foot find these stilts a pleasant diversion

102 **Some Improvised Helps**—Mewerth calls attention to the coffee pot as useful for an improvised inhalation apparatus The patient takes the spout in his mouth ——A handy thermophor can be made of a stout linen bag holding two pounds of

oats or bran, heating the bag in the oven.——In case of a boil in the axilla or on the arm or a felon, the arm can be comfortably supported as the patient reclines, by placing a board under the arm, the end under the axilla resting on the bed, the other end held up at an angle of 45 degrees by a rope fastened to a nail in the wall at the head of the bed.——In suturing the perineum after delivery, he is careful not to cut the threads but to leave the ends long and tie them together in a bunch about 5 cm. from the skin before cutting the ends. By this means one is sure of not overlooking any of the threads later.

Monatsschrift fur Geburtshülfe und Gynäkologie, Berlin

November XXXVI No. 5, pp. 515-636

103 Abortions at Bremen Maternity in Four Years. (602 Fälle von Fehlgeburt.) O. Schmidt.
104 *Stroganoff's Prophylactic Treatment of Eclampsia. C. Holste.
105 *Enucleation of Uterine Myomas. P. Schöpp.
106 Changes in Fallopian Tube During Pregnancy. (Schwangerschaftsveränderungen der Tube.) J. Wallart.

104. Stroganoff's Prophylactic Treatment for Eclampsia.—As THE JOURNAL has repeatedly mentioned, the essential feature of Stroganoff's treatment is the long continued administration of morphin and chloral hydrate and the absolute avoidance of external irritation by quiet, darkening of the room, and in some cases chloroform, with delivery by version or forceps in extreme cases. (For literature on the subject see THE JOURNAL, Nov. 30, 1912, p. 1992.) His dosage may be summarized as follows: immediately 0.01 or 0.02 gm. morphin, one hour later, 1.5 or 2.5 gm. chloral hydrate, the third hour, 0.015 gm. morphin, the seventh hour, 2 gm. chloral, and the thirteenth and twenty-first hour, 1.5 gm. chloral. Holste has treated fifteen women satisfactorily by Stroganoff's method with some modifications. He does not hesitate to induce labor more freely by means of bags, and he does not continue the medication after delivery for fear of secondary lung complications. He discontinues the drugs as soon as marked improvement is noted. He advocates the giving of morphin at the first sign of prodromal symptoms, and thinks that convulsions may often be avoided in this way. He mentions as a possibility in treatment, the administration of serum from a pregnant woman. This serotherapy has been tried in a few cases. On the whole he regards Stroganoff's treatment as preferable to immediate delivery by vaginal or cesarean section, although the method is far from ideal.

105. Enucleation of Myomas.—On the basis of sixty operations performed by him, Schöpp discusses the value of enucleating myomas as compared with the radical removal of the uterus. The conservative operation presents greater technical difficulties than the radical one, yet the mortality was only 5 per cent., not greater than is common in hysterectomies. The great advantage of the enucleation technic is that it leaves the patient capable of bearing children, 10 per cent. of his patients bore children after the operation. In two cases the operation was performed on a gravid uterus with happy results for mother and child. The point commonly urged against enucleation is the danger of recurrence. In 70 per cent. of his cases there was no sign of recurrence. Moreover, at the present time roentgenotherapy offers a valuable adjuvant measure in the treatment of small myomatous nodules which may have escaped detection at the operation.

Munchener medizinische Wochenschrift

November 12, LIX, No. 46, pp. 2489-2544

107 Salvarsan in Treatment of Oriental Sore. (Salvarsanbehandlung der Leishmaniose.) O. v. Petersen.
108 *Improved Technic for Proteolytic Test. (Neue Methode der Darstellung und Registrierung der Wirkung proteolytischer Fermente.) A. Kantorowicz.
109 Resistance of Peritoneum to Infection. (Ueber anatomisch nachweisbare Unterschiede in der Widerstandskraft der Bauchhöhle gegen eine eindringende Infektion.) A. Mayer.
110 Roentgenoscopy of Stomach and Intestines. (Zur Röntgenuntersuchung von Magen und Darm.) A. Hoffmann.
111 Operative Treatment for Sterility. ((Chirurgie der Sterilität.) A. F. Kehrer.
112 *Bone Marrow Grafting. (Knochenmarkstransplantation.) O. M. Chiari.
113 *Prophylactic Appendectomy. (Notwendigkeit der prophylaktischen Appendektomie bei gynäkologischen Operationen, zugleich ein Beitrag zur Frage der sogenannten Appendixkarzinome.) A. Hörrmann.
114 Plastic Operation on Finger. (Fingerplastik.) A. W. Meyer.
115 Acute Amblyopia from Ethyl Alcohol. Kaiser.
116 When to Drain the Common Bile Duct. (Indikationen für die Hepatikusdrainage.) B. Riedel.
117 Excretion of Urea Through the Skin in Nephritis. Portig.

108. Improved Technic for the Antitrypsin Test.—The original technic for the test of the action of the proteolytic ferments was with a Loeffler plate to which loopfuls of the solution of the ferment were transferred. Kantorowicz has improved on this by using sheets of gelatin instead of the plate, the gelatin sheets keep indefinitely and the record is thus permanent. He uses fine gelatin, such as comes for culture mediums, dissolving 6 gm. in 100 c.c. of physiologic salt solution stained deep red with fuchsin and rendered sterile by addition of 0.5 gm. of phenol. He pours 10 c.c. into rectangular shallow dishes. They can be made out of old photograph plates by running a strip of gelatin around the edge to form a wall, pouring the gelatine inside this wall as it hardens. The normal serum digests a circular patch of the gelatine, the presence of the antitrypsin ferment is shown by the smallness of the resulting hole. After twenty-four hours at 22 C., a little lake is seen where each drop has been deposited. The sheet of gelatine is then rinsed in water and the holes in the gelatine look as if punched out with a circular punch, as he shows by two illustrations. The hard sheets of gelatine can be kept indefinitely.

112. Transplantation of Bone Marrow.—Chiari reports successful transplantation into the spleen of a rabbit of a small lump of bone marrow. It had retained its vitality and was found to have increased materially in size when the animal was killed five months later.

113. Necessity for Prophylactic Appendectomy.—Hörrmann insists on the advantages of removing the appendix when the abdomen is opened for a gynecologic operation, reporting instances in which the macroscopically sound appendix was found diseased and a tendency to cancer in some. Of course, after the age of 60 he would not remove the appendix without special cause, nor with cancer, nor in emergency operations.

Wiener klinische Wochenschrift, Vienna

November 14, XXV, No. 46, pp. 1817-1856

118 Specific Extracts of Parasites in Treatment of Trichophytosis. R. O. Stein.
119 *Serodiagnosis of Cancer. (Verwertbarkeit der Freund-Kaminerschen Reaktion.) L. Arzt and W. Kerl.
120 Nodular Syphilitic Meningitis. K. Sugi.
121 Nystagmus in Fever. O. Beck and I. Bloch.
122 *Foreign Bodies in Bladder of Girl Infants. (Ueber Harnblasenerkrankungen bei kleinen Mädchen durch bisher nicht beobachtete Fremdkörper.) H. Abels.

119. Serodiagnosis of Cancer.—The findings on examination of 250 serums from different sources are tabulated. In seventy-four cases the diagnosis on the basis of the serum findings was confirmed by necropsy or histologic findings. In fifty-eight of these all the findings corroborated each other. In sixteen some were contradictory. In 118 cases with only clinical confirmation of the diagnosis there was a contradiction only in seventeen cases. In some of the dubious cases the findings classed as doubtful might really be listed as positive. The table shows that the meiostagmin reaction gave positive findings in 82.8 per cent. of 399 cases of cancer while the reaction was positive only in 9.5 per cent. of 548 persons healthy or with other affections, as reported by eleven research workers. Ascoli obtained a positive reaction in 93 per cent. of his 100 cases. With the Freund-Kaminer technic a positive reaction was obtained in 83 per cent. of fifty-three cases of known cancer and only in 12.5 per cent. of sixteen patients with other affections. Freund and Kaminer comment on the above report that it is suggestive that two patients with tuberculosis and three with gall-stone trouble are in the list of contradictory findings. In one such case in their experience the gall-stone trouble masked a cancer. They warn further that the state of the blood during digestion is liable to interfere with the test for serodiagnosis, the blood should be taken during a fasting period. Another source of possible error is the presence of red corpuscles in the serum, the more limpid the serum the better the findings. [illegible] A little phenol keeps the serum in good condition [illegible] material is thoroughly rinsed with salt solution they found it active for five months They state that by using smaller amounts of serum for the test, it is possible to repeat the procedure several times with a given amount of blood Tests with only a drop or two of serum on the slide have given characteristic results

122 **Bladder Affections of Unusual Origin in Girl Infants**—Abels reports two cases in which severe cystitis in children 9 and 17 months old was explained by discovery of paper and a hair in the bladder, and Blum has recently reported a somewhat similar case in a girl of 4 In the latter case threads from the child's clothing were found in the bladder, and it was learned that she had a habit of pressing her clothes on the urethra to control micturition In the cases of the infants, paper had evidently been rolled up and wound with a hair and introduced like a catheter into the bladder by another person

Zeitschrift fur Geburtshülfe und Gynäkologie, Stuttgart

LXXII No 1 pp 1 251 Last indexed Oct 26 p 1534

123 Development of Uterus (Zur Entwicklung der Form und Lage des Uterus und seiner Ligamente) C H Stratz
124 Changes in Tubal Pregnancy During Menstruation (Veränderungen der Eileiterschwangerschaft während der Menstruation) B H Jägerroos
125 Training of Obstetrical Nurses and Midwives in Prophylaxis of Puerperal Fever F Ahlfeld
126 We Have Outgrown Drainage After Abdominal Operations (Wert der Bauchhöhlendrainage) H Schlimpert
127 No Warning Symptoms of Thrombosis or Embolism (Gibt es prämonitorische Symptome der Thrombose und Embolie?) W Nacke
128 *Puerperal Tetanus Three Cases H Freund
129 Sugar Metabolism in Pregnancy and the Puerperium (Der Zuckerstoffwechsel in der Schwangerschaft und im Wochenbett—Schwangerschaftsleber) L Bergsma
130 Biologic Tests to Determine Sex of Fetus Before Birth Negative Findings (Versuch der intrauterinen Geschlechtsdifferenzierung) T Petri
131 *Anesthesia by Epidural Injections (Hohe und tiefe extradurale Anästhesien) B Strauss

128 **Puerperal Tetanus**—Freund has encountered three cases at intervals of years and is convinced that the infection occurred from the anus through some laceration of the perineum as all other causes seemed to be excluded His experiences teach that women approaching term should be very careful in eating green vegetables and uncooked berries as these are liable to be contaminated with tetanus germs and thus may infect the obstetric wounds through the stools His experience further confirms the value of the traditional practice of giving an active and thorough purge at the beginning of labor and a cleansing enema during the second stage of labor, with careful cleansing afterward He warns further that no obstetric operation should be undertaken without thorough cleansing and sterilization of the skin and protection against infection from the anus He uses for the purpose a large gauze compress pressed between the buttocks fastened with plaster and a towel over the whole firmly fastened in place He thinks that a vaginal douche before the first internal examination and before every obstetric intervention is the best protection against infection from without The alleged harm from changing the chemistry of the vaginal secretions by the douches is far outbalanced by the benefit from mechanically washing out the germs and the material in which the germs find conditions favorable for their development Freund adds further that a prophylactic dose of tetanus antitoxin should be given in every case of criminal abortion in which a wooden instrument was used or its use suspected If the tetanus has developed, antitoxin treatment has little prospect of success unless the bacilli are in evidence In his three cases he was not able to find the bacilli as the period of incubation had been so long before the tetanus developed In the first case a healthy woman convalescing from a well managed childbirth developed fatal tetanus, the first symptoms appearing the ninth day and no source for the infection could be discovered except the possible infection from the stools He adds a case of tetanus from infection of the umbilicus which he traced to the custom of dressing the umbilicus with the sawdust resulting from the boring of the wood beetle in the banisters—this *Holzpulver* being a favorite family remedy in some districts of Germany Freund refers to the Prague epidemic of puerperal tetanus in 1898 in which twenty-eight women died in the course of eighteen months

131 **Epidural Anesthesia**—Strauss reviews his experiences with eighty cases in which operations were performed under extradural sacral injection of the anesthetic The chief advantage of the method is the total absence of complications on the part of the air passages No headache followed the injections, such as is frequent with spinal anesthesia He tabulates the details of the various cases but adds at a later date the case of a woman of 27 who succumbed during an operation for uterine cancer six weeks after a childbirth and necropsy revealed chronic nephritis tuberculosis of the kidney and metastasis in the liver which he thinks is sufficient to explain the fatality without incriminating the method of anesthesia Otherwise he had no by effects except, in a few cases, transient pallor and acceleration of the pulse

Zeitschrift für Urologie, Berlin

November VI No 11 pp 887 996

132 Blunders Liable in Interpretation of Cystoscope Findings (Cystoskopische Irrtümer) I Welsz.
133 Congenital Displacement of the Kidney (Fall von Nierendystopie) N G Lukina

Gazzetta degli Ospedali e delle Cliniche, Milan

November 10 XXXIII, No 135 pp 1409 1424

134 Can Spirochetes Penetrate Intact Skin and Mucosa? (La penetrazione dell agente sifilitico in ispecie degli spirocheti patogeni in genere si puo fare attraverso a pelle e mucose integre?) E Bertarelli

November 12 No 136 pp 1425 1432

135 Iodin Exposed to Roentgen Rays Before Administration in Tuberculosis (I iodo ed i raggi x) C Sighicelli

November 14 No 137 pp 1433 1440

136 Salvarsan Not Effectual in Malaria (Il 606 nella infezione malarica) N Fusco

November 17 No 138 pp 1441 1456

137 *Moist Heat in External Treatment of Infant s Diseases (La termoterapia nelle malattie dell infanzia) I Bueri

137 **External Local Heat in Treatment of Infants' Diseases**—Hot compresses applied to the chest or abdomen are regarded by Bueri as a most valuable adjuvant in treatment of sick infants They aid in promoting and regulating the circulation combating congestion and stimulating the internal organs to better functioning Especially for gastro intestinal disturbances peritonitis and inflammation in the mesenteric glands, this thermotherapy is one of the best measures at our disposal, as he demonstrates anew by a few instances of remarkable benefit from hot fomentations in such cases

Policlinico, Rome

November 17 XIX No 47 pp 1705 1740

138 Treatment of Non Consolidating Fracture C Bartolotti

Riforma Medica, Naples

November 9 XXVIII No 45 pp 1233 1260

139 Biologic Research on Cholera Germs (Antagonismo tra microorganismi isolati dalle feci ed il vibrione di Koch Virulenza del vibrione di Koch isolato da portatori Un vibrione acquatile) D Pane
140 Sarcoma of the Scapula (Considerazioni anatomo patologiche e contributo clinico sui sarcomi della scapula operati con resezione totale e subtotale) M Dardanelli Commenced in No 44

Semana Medica, Buenos Aires

October 24 XIX No 43 pp 809 868

141 Somnambulism in Hysteric Girl of 10 (Desdoblamiento de la personalidad) C Dominguez.

Norsk Magazin for Lægevidenskaben, Christiania

November LXXIII No 11 pp 1537 1692

142 Transient Amaurosis Following Abortion H Gjessing
143 Transplantation in Surgery (Om transplantationer og deres praktiske anvendelse) S Widerøe
144 Ischemic Contracture E I Lindboe
145 Two Cases of Amaurotic Idiocy V Magnus
146 Operative Case of Tardy Traumatic Cerebral Apoplexy (Traumatisk sen apoplexi) V Magnus
147 Phases of Tuberculosis in Relation to Immunity Prevalence etc (Tuberkulosens stadier og immunitetsforhold) K I Andvord

Ugeskrift for Læger, Copenhagen

November 14 LXXIV No 46 pp 1673 1710

148 *Color Test for Quantitative Determination of Albumin in the Sputum (Kolorimetrisk kvantitativ Bestemmelse af Albumin i Opløsninger) M Claudius

148 **Quantitative Color Test for Albumin**—Already summarized in THE JOURNAL, Nov 16, 1912, p 1833

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DIAGNOSTIC PITFALLS IDENTIFIED DURING A STUDY OF THREE THOUSAND AUTOPSIES *

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I wish in this paper to make three points 1 A goodly number of "classic" time-honored mistakes in diagnosis are familiar to all experienced physicians because we make them again and again Some of these we can avoid, others are almost inevitable, but all should be borne in mind and marked on medical maps by a danger-signal of some kind "In this vicinity look out for hidden rocks," or "Dangerous turn here, run slow" I shall enumerate some of these danger points presently

2 Some common diseases are relatively inaccessible to diagnosis, no matter how carefully we are on the watch for them From the study of 3,000 autopsies, I have begun to work out a percentage or ratio of accessibility for the commoner diseases (shown in the accompanying chart)

3 Besides the classic and well-known pitfalls there are some less familiar to the profession and needing all the more, therefore, to be marked "dangerous"

FREQUENT AND WELL RECOGNIZED PITFALLS

I shall first enumerate without discussion some of the commoner mistakes

"Acute gastritis" is a rare disease in adults As a rule appendicitis or gall-stones is the correct diagnosis

"Chronic indigestion" is usually a mistaken diagnosis, the actual condition being peptic ulcer, pulmonary tuberculosis, constipation or cancer of the colon

"Bronchitis" usually proves to be phthisis, bronchiectasis or bronchopneumonia at autopsy or in the outcome

"Asthma" beginning after middle life is usually symptomatic of cardiac or renal disease

"Unresolved pneumonia" is frequently a mistaken diagnosis, the real disease being interlobar empyema

"Malaria" is often given as the diagnosis in cases of phthisis, hepatic syphilis, hepatic abscess and urinary infections

"Typhoid fever" in a *patient's history may mean* tuberculosis or latent sepsis (septic endocarditis, suppurative nephritis, etc)

"Rheumatism" has sometimes turned out in my experience to mean aortic aneurysm, cancer of the pleura, tabes dorsalis, osteomyelitis, spondylitis deformans, bone-tuberculosis, syphilitic periostitis, lead-poisoning, morphin habit, alcoholic neuritis, trichiniasis and gonorrheal infection "Rheumatism" is one of the most dangerous of all diagnoses to the conscientious physician

"Cystitis" is usually a symptom, not a disease It points to disease below the bladder (stricture, obstructing prostate, etc), or above it (renal tuberculosis and other renal infections) as its cause

"Hemorrhoids" often mask cancer of the rectum

"Neurasthenia" The real disease almost always shows itself in youth on the basis of congenital tendencies, though like tuberculosis it may be roused into active progress by any prolonged strain, mental or physical When it appears after middle age it is almost always a symptom of organic disease such as dementia paralytica, chronic nephritis, arteriosclerosis, myxedema, hyperthyroidism or phthisis

The incipient stages of the disease mentioned in the last sentence are rarely recognized The same is true of gastric ulcer, pernicious anemia, leukemia, cirrhosis of the liver, congenital renal cysts, renal tuberculosis and many other diseases

All this is trite and obvious, but I mention it to *avoid the reproach of ignoring it*

As one looks at the accompanying chart of diagnoses one naturally asks Whose success or failure does this represent? Where Smith and Jones have failed, could you and I have done better? I doubt it The study of the details in these cases before and after death convinces me that, for the present and under the present limitations of diagnostic method, few of the mistakes tabulated above could have been avoided The table represents the success-and-failure ratio of certain methods rather than of certain men Admitting that the man behind the gun (or the method) makes a vast difference, I do not believe that these figures depend to any considerable degree on the possession or lack of special virtuosity in diagnosis They mirror the methods of an average up-to date American hospital

But the figures are undoubtedly modified by the great difference between terminal lesions (such as acute endocarditis, pericarditis and nephritis) and insidious slowly developing lesions like those of typhoid infection or pernicious anemia In the latter we succeed, in the former we fail frequently

Again, diseases which kill so quickly that the period of observation is very brief and the history often faulty or lacking altogether will always show a large percentage of diagnostic failures Cases of cerebral hemorrhage or coronary occlusion exemplify this

At the successful end of this table I might have inserted (did space permit) pernicious anemia, leukemia, malaria, [illegible] p [illegible] renal c[illegible], dementia paralyti[illegible] and [illegible] eases which are easily recognized as a rule by the routine application of modern diagnostic methods.

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* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session held at Atlantic City June 1912

At the other and more humiliating end of the scale I could add acute pancreatitis, hemorrhagic pachymeningitis, hypernephroma (in its early stages) and many others.

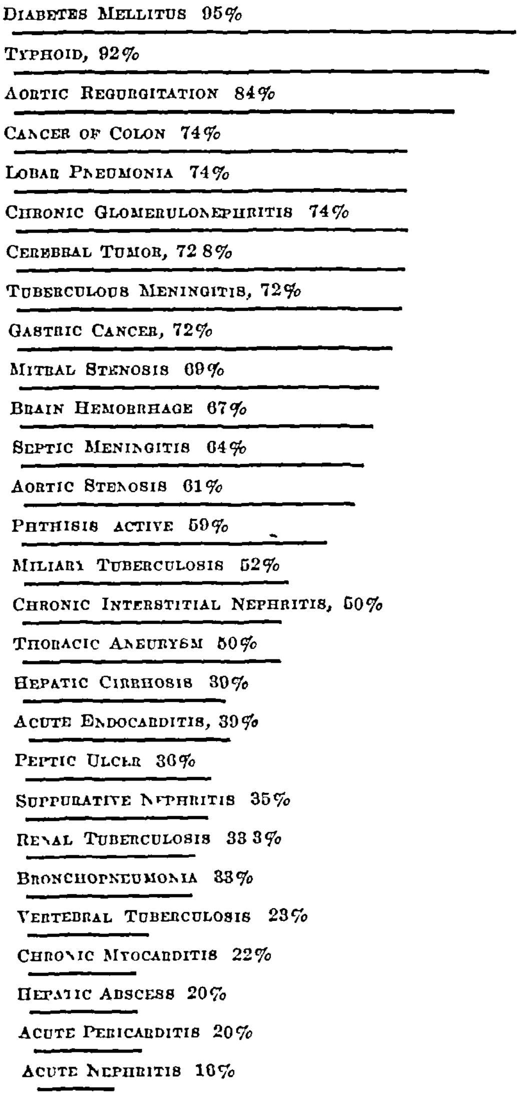
RELATIVELY UNFAMILIAR MISTAKES

VERTEBRAL TUBERCULOSIS

Most physicians believe that Pott's disease of the spine is easily recognized because of the "knuckle" in the spine, the pressure signs, muscular rigidity and secondary abscesses, but the difficulty is precisely in that group of cases which do not show these signs.

PERCENTAGES OF DIAGNOSTIC SUCCESS

TABLE SHOWING GRAPHICALLY THE PERCENTAGE OF CORRECT DIAGNOSES IN VARIOUS DISEASES



Some of the most humiliating yet almost unavoidable failures of my experience have been made in cases which showed post mortem the lesions of Pott's disease. Only four of the seventeen cases that came to autopsy in this series of 3,000 post-mortems were recognized in life. In ten of the thirteen "misses" there is "no blame to be attached to the officials in charge." The diagnosis was not suggested by any of the facts at our disposal. The clinical picture was usually that of an overwhelming infection (miliary) which was called "septicemia from pelvic abscess" (really a psoas abscess) "meningitis," "acute uremia" (two), "septic scrotum," "otitis media with pyemia," "pneumonia" (two) and "septic hand with general sepsis."

In two cases there was a slight kyphos which should have been noticed, but as it had been there for many years without change, it was ignored. In one case there was a gradual, even curve of the whole spine diagnosed by a skilful orthopedic consultant as spondylitis deformans.

The ages of the thirteen patients whose disease was unrecognized were 26, 51, 54, 81, 29, 44, 49, 53, 50, 64, 65, 45, 40. The average is fifty years. In the four recognized cases the ages were 34, 40, 34, 21 (average, 32).

The moral is that we do not look or ask carefully enough for evidence of old vertebral tuberculosis in elderly patients, because we associate the disease with youth.

ACUTE UREMIA

In this series and in private practice outside it I have never found a correct diagnosis of acute uremia. Yet the diagnosis is a very frequent one. Among the diseases wrongly diagnosed as "acute uremia" I have seen two cases of sporadic meningitis (due to Weichselbaum's diplococcus), two of miliary tuberculosis, one of general streptococcus sepsis, three of arteriosclerosis (especially cerebral, kidneys sound), one of hepatic cirrhosis, one of pyelitis and one of bladder cancer.

Most of the wrong diagnoses of acute uremia are made in comatose patients seen for the first time in that condition and with little or no history obtainable. The urine is drawn by catheter and found to be loaded with albumin and casts. The diagnosis follows, regardless of the fact that in practically all comatose patients we find abundance of albumin and casts, no matter what the cause of the coma may be. I will not deny that acute uremia may occur and be recognized post mortem as the cause of death, but in my experience and in the 3,000 autopsies which I have studied, it has never been so. In my experience, uremia is a chronic condition supervening gradually and in association with edema, vomiting, headache and retinitis in relatively young subjects. In these cases no other cause for coma is found post mortem and the kidneys are extensively diseased. The blood-pressure is usually high but may be low. In most of the cases diagnosed as "acute uremia," other well-recognized causes of coma are found post mortem, and the kidneys show no evidence of nephritis.

I have therefore ceased to consider acute uremia in the diagnosis of cases of sudden coma "out of a clear sky" or with only a few days' illness preceding.[1]

CIRRHOSIS OF THE LIVER

That this disease has a long period of latency when diagnosis is impossible, has long been recognized, and most of eighty cases autopsied in the Massachusetts General Hospital series merely corroborate this.

Of the eighty cases, thirty-one were recognized during life, and forty-nine were not recognized. In sixteen of the forty-nine "misses" the amount of interstitial change was but slight at autopsy, but there remain thirty-three cases unrecognized despite a well-marked type of the disease. In three cases the clinical picture was essentially that of apoplexy, though the brain was normal Sudden death (toxemia) is by no means rare in cirrhosis, the fatal coma quickly supervening in apparent perfect health If cirrhosis had been considered as a factor in the differential diagnosis of these cases it is possible that the diminution in liver dulness might have been recognized and the disease identified

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[1] Puerperal eclampsia is of course often acute but its cause does not reside in the kidney.

Three cases were mistaken for peptic ulcer on account of the profuse hematemesis In time I think it will be recognized that this symptom is of more value in cirrhosis than in peptic ulcer since it occurs in only 20 per cent or less of the ulcers (gastric or duodenal), and in 26 per cent of the cirrhoses[2] Moreover, hematemesis without other symptoms is far more characteristic of cirrhosis than of ulcer, which usually produces pain of a recognizable type and course

In six cases the clinical picture was that of decompensated heart disease I do not see how the cirrhosis could have been recognized, especially as not all the cases were alcoholic The absence of alcoholism by no means excludes "alcoholic cirrhosis"

In three cases gall-stones were also present and caused all the symptoms

Cirrhosis was latent in patients dying from hyperthyroidism, cancer of the prostate, cancer of the rectum, cancer of the cecum, pancreatic cyst, pancreatic cancer, pneumonia after fracture of the femur, cut throat, aortic aneurysm, dementia paralytica, diabetes, hemophilia (no jaundice), and many other diseases

Cases without ascites were rarely recognized in this series, though in some of these non-ascitic cases the "causeless hematemesis" should have suggested the correct diagnosis When ascites was present the disease was mistaken (in two cases) for tuberculous peritonitis (a disease which did not occur simultaneously in this series, though many such cases are on record) The high lymphocyte count not infrequently found in the sediment of cirrhotic ascites helped to mislead us

The terminal event was pneumonia in three cases, general streptococcus peritonitis in two

My chief conclusions from this series are that we have underestimated the frequency of the disease and the difficulty of its recognition, that it must be remembered as a possibility in all cases of sudden "causeless" coma and especially when unexplained hematemesis is the main symptom

CANCER OF THE COLON

Out of forty-three autopsied cases, eleven, or over 25 per cent, were not recognized in life In this group two patients were operated on and even then the cancer was not found Two others had brain-metastases, and all other symptoms (as in miliary tuberculosis) were overshadowed by the cerebral manifestations Two were not recognized as springing from the colon because perforation of a stercoraceous ulcer above the obstruction had led to the formation of a large perienteric exudate so firmly fixed to the surrounding parts that in life a tumor springing from the pelvic bones was suspected In studying the ante-mortem conjectures and post-mortem findings, it is clear that the perforation of stercoraceous ulcers had not been recognized as a frequent complication in cancer of the colon The symptoms of a general peritonitis resulting from such a perforation constituted the first and last act of the clinical drama in one case of this series

In two cases the most prominent symptoms were those of acute renal infection ("pyelitis")

Tumors were rarely felt Most of the correct diagnoses were based merely on symptoms of chronic and increasing obstruction (often with intermissions of perfect health or of diarrhea) in elderly persons The inference that cancer was the cause of this obstruction was made simply because statistics show that cancer is the only common cause of chronic obstruction in elderly people (average age, 59)

A long period of latency (palpable tumor for three years in one case) without symptoms and then a sudden acute obstruction, is a common clinical type of this disease

I conclude therefore that in the diagnosis of cancer of the colon we must be guided chiefly by the evidence of obstruction, without obvious origin, in an elderly person, that we must remember the frequency of perforated stercoraceous ulcer as a prominent clinical feature in many cases, and that complications such as cerebral metastases or urinary infection may overshadow the intestinal symptoms

HEPATIC ABSCESS (NON-AMEBIC)

In thirty autopsies there were six correct diagnoses (20 per cent) In three other cases the diagnosis perhaps should have been made on the evidence available

The clinical picture is one of general septicemia, usually without definite signs pointing to the liver We have learned, however, that fever, chills and leukocytosis following an appendix operation with drainage usually means hepatic abscess Five of the six correct diagnoses were in cases of postappendicular sepsis, one other followed cholecystitis

Occasionally jaundice and an enlargement of the liver, demonstrable in the right back by signs identical with those of a small pleural effusion, give us a hint of where the pus is

Many cases of so-called "toxemic" or "hematogenous" jaundice in sepsis are due in fact to hepatic abscess

Pain and tenderness over the liver were not present in a single case of this series — as would be expected from the post-morten findings The pus was always deep in the substance of the liver, never impinging on the capsule where all the liver's sensitive nerves are distributed

General sepsis after operations involving drainage of the appendix or the gall-bladder, or after an attack of colitis, should always make us suspect hepatic abscess

CANCER OF THE ESOPHAGUS

One of the simplest of diagnoses, one would say offhand, and yet among the twenty cases autopsied in this series four were not recognized in life, and in three others the diagnosis was doubtful

In three of the four "misses" and one other case correctly diagnosed by esophagoscopy, there was no dysphagia whatever In one of these blood was vomited and the clinical diagnosis was "cancer or ulcer of the stomach" In another there were no gastro-intestinal symptoms and no dysphagia The clinical picture was of cardiorenal disease and this was confirmed at autopsy, but the gullet cancer was also obvious and extended into the cardiac end of the stomach It has produced no constriction and no gross hemorrhage Hence it was "silent" and unrec

In a third case

tumor in the neck

cancer, but its

was not suspecte

reasonably have

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[2] Rolleston Diseases of the Liver p 263.

In the fourth of our "misses" there was dysphagia, but as this was associated with paralysis of the left vocal cord and an *x*-ray shadow interpreted as aneurysm or mediastinal tumor, we were thrown off the track Hoarseness or aphonia (such as occurred here) was present in two other cases and should be remembered as a not uncommon sign of gullet cancer

The percentage of wrong diagnoses in this series would have been larger but for the routine use of the esophagoscope in the later cases Dangerous though this procedure is in any but the most experienced hands, it is yet a necessity for accurate diagnosis of the cause of gullet obstruction in many cases

One case with hematemesis and intermittent (not constant) dysphagia had been considered a functional or spasmodic rather than a cancerous stricture until esophagoscopy revealed its true nature

LATENCY OF ADVANCED PHTHISIS IN DIABETES MELLITUS

Though the frequency of phthisis complicating diabetes is a familiar fact, it is not generally recognized, I think, that there is a peculiar latency and lack of symptoms in this type of tuberculosis In thirty-nine autopsies in cases of diabetes there were nine cases of active tuberculosis and not one of them was recognized in life In one other case tuberculosis was diagnosed but pneumonia (not tuberculosis) was found Most of these patients had no expectoration and slight or no cough — quite a different clinical picture from that usually seen in non-diabetic cases of phthisis in the same stage of the disease

100 Marlboro Street

ABSTRACT OF DISCUSSION

Dr Charles G Stockton, Buffalo, N Y Two years ago in St Louis Dr Cabot delivered an address which I think was epoch making in diagnosis in internal medicine I have made it a practice to reread that address each year since then and I commend the practice to my fellows here It is a matter of great importance that one is able to carry out such a study in an institution where the records are so carefully kept and the examinations so well made I should like to inquire, however, why such an inquiry had not been made before Why is it not possible to do the same to day in other institutions similar to the Massachusetts General Hospital? In most hospitals the records are not of a character permitting a review which would give valuable information

If nothing else comes from my remarks I hope that they may stimulate a desire to secure better and more uniform systems of records, so that more certain results may follow summarization If this were done we would have an enormous mass of statistics from which we might make estimations that would be invaluable Think what would follow if the men here present would present their results as these have been presented to day by Dr Cabot Of course this requires the opportunity, and it requires the man as well

What Is Dirt?—It is by hygienic precautions that certain diseases are prevented and the basis of bacteriology is experiment in animals But I should like to quote again from Professor Halliburton on the general questions of serum treatment which has been stigmatized as "messy besides some less elegant criticisms Filth or dirt" he says, "has been well defined as matter in the wrong place Blood on a carpet for example is certainly messy and dirty it ought not to be there But blood or serum in the heart or in the arteries and veins is in its rightful place, and it does its duty of nutrition where it comes into more immediate contact with the tissues—the small tubes we call the capillaries One of these duties is to exert a protective influence on the whole body, by destroying the germs of disease which get into the body in spite of all precautions"
—F M. Sandwith in *Clin Jour*

PATHOLOGIC LESIONS OF THE KIDNEY ASSOCIATED WITH DOUBLE URETERS

REPORT OF CASE OF HYPERNEPHROMA *

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In all branches of medical practice it is a great joy to the physician accurately and minutely to fix the seat of disease Localization of trouble in one kidney with simultaneous exclusion of it from its fellow is such an old story to the urologist that this really clean-cut diagnosis no longer arouses amazement Yet when some fortuitous anatomic or other condition makes possible a closer localization of a pathologic lesion, his enthusiasm is aroused After all, in the apparently simple cases perhaps he is sometimes too sure of himself Anomalies in the excretory apparatus may seriously upset his calculations and at times lead to most disastrous results to the patient My interest in the subject of anomalies has been keenly aroused by the following case

REPORT OF CASE

Patient—A married woman aged 43, entered the Presbyterian Hospital of New York City, Jan. 23, 1912, in the service of Dr Joseph A Blake, to whom I am indebted for the privilege of making this report The patient had pneumonia three years before admission, and had coughed blood one year before, a supravaginal hysterectomy had been done three months before admission

Present Trouble—The patient had attacks of hematuria and pain in the right lumbar region One year before, the patient had felt a sharp non radiating pain in the right lumbar region, lasting several hours The next day very bloody urine was passed. A similar attack occurred six months later, and several more subsequently There had been no frequency of urination and no loss of weight Occasional night sweats and some cough were complained of recently

Examination—The patient was a small, thin woman, perhaps slightly emaciated. The heart was normal The lungs showed a few scattered râles The abdomen revealed nothing abnormal, the right kidney was easily felt, smooth, not tender, not much enlarged, the left kidney was not felt By the vagina, a small cervical "polyp" was palpated The urine the first few days contained a trace of albumin, little pus, some times a few red blood cells, an occasional granular cast, no tubercle bacilli

Cystoscopy and Catherization—I was asked to try to determine the source of the hematuria At the time of my first examination (January 27), the catheterized bladder urine was clear and microscopically free from both pus and red blood cells Cystoscopy was easily performed, and an excellent view of the bladder obtained. It presented no tumor or calculus, and the mucosa was entirely normal The left ureteral orifice was of normal appearance and in the usual position, and functioned normally In a corresponding position on the right side of the trigon was an orifice with a similar normal elongated contour About 5 mm dorsosuperior and apparently a little mesial from this orifice was a smaller and round depression which was seen to function as a ureteral mouth. Careful observation revealed entire independence of action of these two right ureteral openings They were both easily catheterized and the catheters (No 6 F) were introduced about 25 cm A typical intermittent flow was obtained from each and 5 c.c. of urine simultaneously collected from each in the same interval of time The specimen from the cephalic orifice was almost clear, contained 0 4 per cent urea, no pus and few red blood cells That from the caudal orifice was bloody from the start (a suggestive point, I think), con

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* Read in the Symposium on Renal Surgery and Pathology in the Section on Genito-Urinary Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

tained only 0 2 per cent urea, no pus and much blood The cystoscope was removed from the bladder, catheters being left *in situ*, fitted with another pair of catheters and reintroduced The catheters on the right side were noted to be in position, and the left ureter then catheterized. Its outflow was nearly clear, was microscopically negative but for a few blood cells, and contained 0 6 per cent urea

Urine Test—A phenolsulphonephthalein test was done, 6 mg being injected intravenously Color first appeared in the urine in four and one half minutes During the subsequent half hour the catheter in the caudal ureteral mouth discharged urine very slowly In the first fifteen minutes the left ureteral catheter gave 12 c c. of urine and 16 4 per cent of the drug, the right "cephalic ureter" (an inexact phrase used for brevity) 8 c c and 7 2 per cent, the right "caudal ureter" 2 c.c and 0 3 per cent In the second fifteen minutes the left catheter gave 8 c.c and 11 7 per cent, the right cephalic 5 c c and 3 5 per cent, the right caudal 1.5 c c. and 0 4 per cent Attention is called to these facts Making abundant allowance for a possible extra catheter flow from the caudally placed ureteral mouth, it is to be noted that the right ureter with the cephalic orifice produced less than half as much phenolsulphonephthalein as the left ureter, and that the right "caudal ureter" produced less than half the amount recovered from the "cephalic ureter" It is to be remembered also that the urine from the two right ureters contained about the same relative percentages and amounts of urea, that is, twice as much from the cephalic as from the caudal ureter In other words, the lower (the caudal) ureter mouth was associated with renal tissue of about half the functional ability (at least for excretion of urea and phenolsulphonephthalein at the time of the test) of the renal tissue drained by the other right ureter

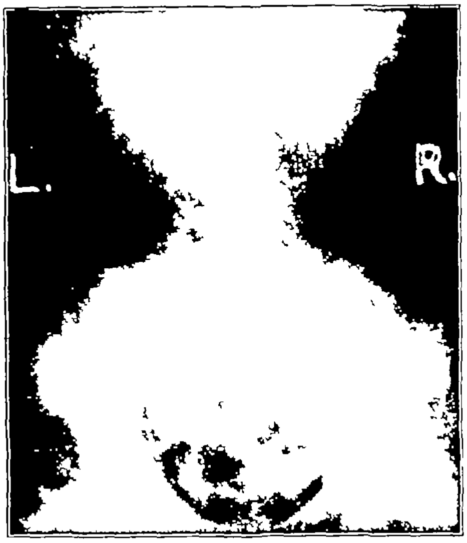

Fig 1—Radiograph with 20 per cent argyrol Left pelvis normal lower right pelvis with tongue like shadows at lower part upper right pelvis very faint

Argyrol Radiographs—With the three ureteral catheters *in situ*, argyrol 20 per cent. was injected into each and a radiograph taken It showed a normal left renal pelvis and ureter, and a smaller right renal pelvis with two thin shadows radiating inferiorly and laterally Mesial to its ureter, another and fainter line was evident leading up to a poorly outlined elongated shadow above the right pelvis just described (Fig 1)

Skiagraphic catheters were passed into the two right ureters, February 2 The catheters were carefully marked, and the one entering the caudally placed ureteral orifice was injected with argyrol (through a misunderstanding it was again only 20 per cent) and a radiograph taken The other catheter was then injected till slight discomfort was produced, and a second plate exposed (Fig 2) In this way t caudally placed ureter mouth was definitely associated with the lower (the caudal) portion of the right kidney This lower portion of the kidney, then, represents a smaller amount of renal excretory function, according to the tests, than the upper portion of the right kidney, yet it is represented on all our *x* ray plates by a larger renal pelvis (but by an abnormal one) draining a larger superior inferior area In view of this radiographic evidence, the function tests, the immediate appearance of blood when the ureteral catheter was passed up to the lower renal pelvis, and the negative bladder examination, the assumption seemed well grounded that if the blood came from the urinary tract, it had its origin in the lower pole of the right kidney and most likely in a neoplasm of this region

Because of the presence of cervical polyps, some doubt was felt as to the source of the blood These polyps were removed Marked hematuria, however, recurred and bladder catheterization fixed the responsibility on the urinary tract

Operation and Result—February 24, Dr Blake operated through a right lumbar incision The fatty capsule of the kidney was adherent on the lower posterior surface A tumor in the kidney substance was evident, and nephrectomy promptly done Blood vessels entering the lower pole of the kidney interfered with the dissection toward the pedicle They were divided between clamps, which also included the lower ureter, as was clear later The operation proceeded as usual Most of the perirenal fat was excised Convalescence was normal and progressive, the temperature never above 100 F, and a good output of urine was noted daily The patient left the hospital March 17

Pathologic Report—The kidney (Figs 3 and 4) is 12 cm long and 4 cm in thickness Presenting from the lower half of the posterior surface, is a lobulated round sharply outlined tumor 4 5 cm in diameter, with a very definite connective tissue capsule On cut section of the fresh specimen, the tumor is seen to form definite lobules arranged in the most part about a common center suggesting a hilum, the color is light yellow The renal parenchyma of the upper part of the organ is normal in appearance and thickness The upper pelvis presents two major subdivisions, each in turn draining three calices, two placed posteriorly one anteriorly These calices are all intact are not associated with the tumor, and [illegible] nect with the other pelvis The lower pelvis is [illegible] the tumor and can be identi [illegible] primary dila [illegible]

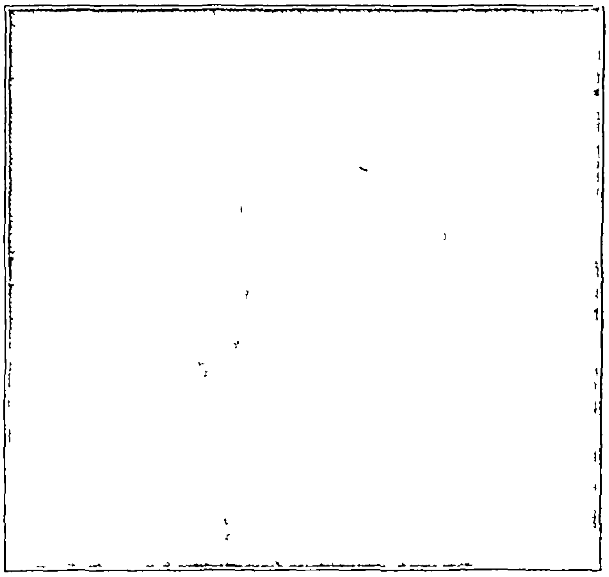

Fig 2.—Radiograph with 20 per cent argyrol (too weak) showing two right renal pelves overlapping (non-communicating) and lead impregnated catheters in double ureter

blood vessels entering the kidney are distributed along the anterior aspect of the hilum, and a few posterior to the lower pelvis None of the veins contain tumor material

Microscopic Examination—Microscopically the tumor shows a mass of large epithelial cells with relatively small nuclei and clear cytoplasm, arranged in alveoli supported by a very delicate framework of connective tissue branching from dense trabeculæ At points the alveoli form an adenomatous structure The tumor seems well encapsulated and no invasion of renal parenchyma or pelvis was found It evidently belongs to the group of tumors classed as hypernephromas, and was so diagnosed by Dr W C Clark of the pathologic department of the hospital.

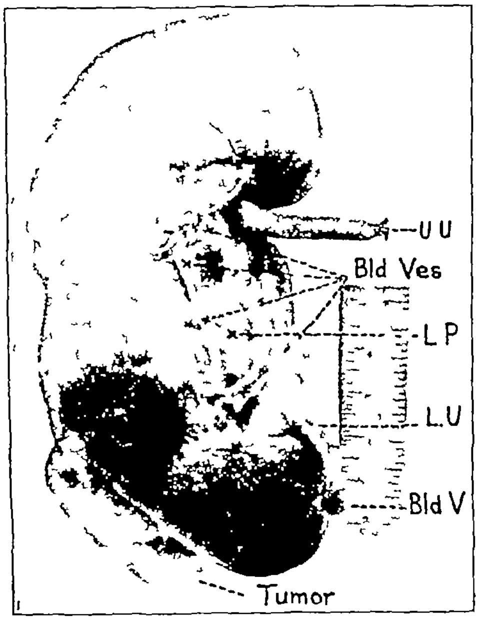

Fig 3—Anteromesial aspect of right kidney U U, upper ureter L P lower pelvis L U lower ureter Lower ureter clamped and cut at operation with blood vessels marked Bld V

LESIONS ASSOCIATED WITH DOUBLE URETERS

Double ureters may be incomplete or complete, that is, they may join and enter the bladder through a common opening or may remain apart and enter the bladder through independent openings Normally in embryonic life the renal bud, soon after its appearance as an outgrowth from the wolffian duct, splits terminally into cephalic and caudal portions, which ultimately become the two main divisions of the pelvis That portion of the wolffian duct between the renal bud and the cloaca becomes absorbed in the cloaca, thus affording separate openings for ureter and wolffian duct (the future vas deferens) Double ureters are thought to originate from double budding from the wolffian duct or by extension downward of the split occurring normally at the end of the renal bud It seems likely that an extra renal offshoot gives rise to another fully developed pelvis and its development in adult life should be regarded as a supernumerary kidney, whether separated from or joined to its neighbor of the same side The cleavage process, however, is regarded as the more probable explanation of reduplication of ureters (Meyers,[1] Pohlmann[2] Huntington[3]) When the cleavage is complete, one finds completely double ureters — ureters with independent openings in the lower urinary tract Subsequent development and unequal growth of the region of the lower ends of the ureters cause an apparent rotation which brings the orifice of the ureter from the upper pelvis mesial to and usually mesial and caudal to the orifice of the ureter from the lower pelvis, and the opening of the wolffian duct caudal to the ureter Moreover, the lower pelvis, which as a rule is the larger, usually empties into the bladder at the *normal* site for a ureteral opening on the trigon

I have outlined briefly these features of development to call attention to the fact that in the case here reported, the ureter from the lower pelvis did empty into the part of the bladder normally receiving a ureter, but contrary to rule, its fellow opened not distal but proximal to it I have found but one other such instance, a report by Kerr[4] of an exactly similar relation of orifices of double ureters in a post-mortem observation

It will be noted that, according to the *x*-ray plates, the ureters do not cross in their course from kidney to bladder If they cross in a given case they must recross, as the ureter from the upper pelvis starts mesial and ends mesial to its fellow

Because of the idea that many neoplasms have as a basis some congenital abnormality, and regardless of one's views concerning the histogenesis of hypernephromas, one is at first impressed with the association of this renal tumor with a congenital anomaly of the collecting apparatus Yet embryologically I can see no relationship beyond the possible evidence of a general tendency of the particular organism to congenital abnormalities The reduplication usually concerns the collecting apparatus only, not the kidney parenchyma which is derived from another and very different source In fact, in these cases of double ureter the kidney has as a rule the contour of a normal organ, moreover, I have found no other instance of hypernephroma of the kidney associated with double ureter and pelvis The nearest approach was a case of Kapsammer[5]—hyperne

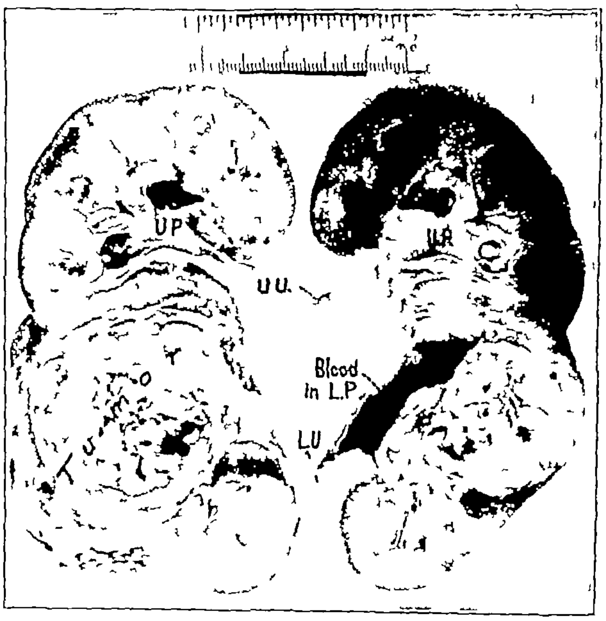

Fig 4—Section of right kidney through both pelves U P, upper pelvis U U, upper ureter L.P lower pelvis L U lower ureter

phroma of the right kidney and double ureters from the left kidney

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[1] Meyers Virchows Arch f path Anat 1907 clxxxvii 408.
[2] Pohlmann Am Med 1904 ii 987
[3] Huntington Harvey Lecture 1907
[4] Kerr Anat Rec 1911
[5] Kapsammer Nieren Chirurgie, 1907 i 2.

Contrary to the view of older writers, ureter duplication, in part or in whole, has a decided clinical interest and importance but only in recent years has a diagnosis been made before operation or necropsy Kapsammer observed in 1905 perhaps the first case of bilateral complete doubling of the ureters diagnosed during life The four orifices were catheterized and the two pelves of each kidney proved non-communicating by the injection of indigocarmin into one ureter and its failure to return through the other The two right ureters gave normal urine, both left ureters discharged a little pus This was cleared up by lavage

Seelig[6] reported last year another case (observed in 1910) of this bilateral complete duplication with radiographic plates showing collargol in the four pelves and bismuth-impregnated catheters in the four ureters Clinically his observations were most interesting — the right upper pelvis gave albumin and epithelial and blood-casts, the right lower pelvis, normal urine the left upper pelvis, a definite amount of pus but no casts, the left lower pelvis, only a few leukocytes

B Lewis[7] and Newenow[8] reported cases of double ureters on the left side, with clear urine from one and pus (and gonococci in Lewis' case) from the other (determined by catheterization) The infection in both instances was cleared up by pelvic lavage

Similarly Franke (quoted by Pasteau[9]) in a patient with two ureters from the right kidney, found one ureter excreting clear, and the other purulent urine By operation, an artery crossing and partially obstructing one ureter was divided, and the patient's symptoms were relieved Kapsammer's case of extensive tuberculosis of a left kidney having complete double ureter is of no special significance in this connection

Of the reported cases of renal diseases associated with incomplete double ureter, those of Stark[10] and Wulff[11] are notable as having been correctly diagnosed before operation The former on different days obtained clear and purulent urine from the left kidney, the output from the right kidney being always normal Stark inferred that there was a bifurcation of the left ureter, and that his catheter had entered different pelves on the two examinations Operation confirmed the diagnosis The upper part of the kidney was normal, as was its ureter, in the lower part there was a pyonephrosis, and its ureter was much thickened Stark feared infection of the remaining portion should he attempt a resection of the kidney, and consequently did a complete nephrectomy Subsequent recurring infection of the bladder from the ureteral stump would seem to confirm his judgment Wulff, in his case, obtained purulent urine from the ureteral catheter in the left ureter, but clear urine when this catheter was pushed higher A forked ureter with two pelves, one infected, the other normal, was found at operation

Rafin,[12] Kapsammer,[5] Israel[13] and Dumitreanu[14] report instances of infected kidneys each with two pelves and two ureters (i e, a double ureter in at least its upper portion), discovered only at operation In all of these four specimens, the infection (tuberculosis in Kapsammer's patient) was confined to the part of the kidney associated with *one* pelvis, while the other portion of the organ was normal Kusnetsky's case[15] was similar, additional interest was afforded by the presence of a large stone in the ureter associated with the pathologic pole of the kidney at the junction with its fellow ureter

Bruel's report[16] concerned a like condition superficially One end of the organ was virtually a pus sac, but the other with its ureter appeared normal On section this supposedly normal pole showed miliary abscesses and intense interstitial infiltration An attempt at resection here would have been worse than futile Nevertheless a successful resection of a pyonephrotic sac with a part of its ureter, leaving the upper portion of the kidney and its ureter, was reported by D'Lennander[17] He first did a lumbar nephrotomy and later appendectomy and the partial nephrectomy through an abdominal transperitoneal wound Probably one would feel justified in doing a heminephrectomy in few cases of infection of one-half a kidney with two pelves and ureters, for fear of subsequent involvement of the remaining portion Just which cases are suitable is a matter for individual judgment The difficulty of such an operation would depend largely on the arrangement of the blood-vessels If the kidney substance should possess independent blood supply at either end, and the intervening portion be of smaller diameter than the ends, as in Albarran's case,[18] the operation is comparatively simple His patient had a lumbar fistula following nephrostomy performed by another surgeon Ureteral catheterization disclosed a normal left kidney and a good quality of urine coming from the right ureter Fluid injected into the latter did not come out of the nephrostomy wound The anomalous condition found at operation was not suspected before Albarran speaks of the findings as "two kidneys" placed one above the other, joined together, but each having its own blood-supply as well as pelvis and ureter The upper end was pyonephrotic and was excised Apparently no mention is made of the termination of the ureter from the excised kidney If it ends in the neighboring ureter, one ureter probably represents embryologically an abnormal sprout from the other ureter Such an explanation was offered by Huntington for a similar museum specimen

The reports of Young[19] and Key[20] demonstrate that double ureters may be the cause of serious mistakes The former recited the details of an interesting well-studied case of renal calculus Pus was obtained from the right ureter, clear urine from the left A radiograph showed a large calculus filling the right renal pelvis, but none in the left kidney Right nephrolithotomy was performed The autopsy disclosed two pelves in the left kidney, and two ureters joining before reaching the bladder The upper pelvis contained calculi and pus but its ureter was plugged up, and the ureteral catheter passed on the left side went up to the normal pelvis The *x*-ray plate had been placed too low to show the left renal calculus Briefly, Key's patient presented a double renal pelvis on the right side There had been pus in the urine, but none was present at the time of the examination A radiograph gave a shadow mistaken for stone This proved to be a tuberculous abscess in the upper part of the kidney Here again the ureter draining this region was plugged, and only clear urine from the other pelvis reached the bladder from the right kidney

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[6] Seelig Ztschr f Urol November 1911
[7] Lewis B Med Rec 1906 lxx
[8] Newenow Fortschr a d Geb d Roentgenstrahlen 1910 xvi 157
[9] Pasteau Ann d mal d org génito-urin 1911 i 693
[10] Stark Ztschr f Urol 1911 p 466
[11] Wulff Quoted by Pasteau Deutsch med Wchnschr 1906 p 1760
[12] Rafin Ann d mal d org génito urin 1909 i No 3
[13] Isreal Chirurgische Klinik der Nierenkrankheiten 1901
[14] Dumitreanu Deutsch med Wchnschr 1908 xxxiv 1333
[15] Kusnetsky Ztschr f Urol 1909 iii 927
[16] Bruel Ann d mal d org génito urin 1911 i 561
[17] D Lennander Arch f klin Chir 1900 lxii 471
[18] Albarran Médecine opératoire des voies urinaires 1909 p 267
[19] Young Johns Hopkins Hosp Rep 1906
[20] Key Ztschr f Urol., 1909 iii 400

Lastly, von Fedorow[21] reports an interesting case Two normal ureteral openings were seen which on catheterization gave normal urine from the right side and a little pus from the left Lateral to the left ureteral orifice was a thin-walled cyst At operation, this was incised, found to lead upward to a ureter running close to the other left-sided one but without connection with it A plastic operation was done on the cyst, relieving the symptoms — pain in the left kidney and frequent and painful urination Six months later, the original left ureteral orifice gave urine free from pus, while its fellow, which at first probably had only a very small bladder opening but now had a large one, produced urine containing pus

I have arbitrarily omitted the general subject of stricture of the ureter (a matter thoroughly discussed in comparatively recent papers, notably that by Bottomley[22]), and have considered only cases of double ureter presenting some associated renal lesion other than a possible hydronephrosis caused by congenital stricture of the ureter In Bottomley's collection of fifty-six cases, eleven patients had supernumerary ureters

Concerning the frequency of double ureters, Kerr[4] reports four instances of unilateral complete double ureters in 165 dissecting-room subjects, Pohlmann,[2] two complete double ureters in over sixty embryos, G M Smith,[23] three incomplete double ureters (bilateral in two cases) in 100 autopsies, in general autopsy work, unilateral double ureters are recorded in from 1 to 4 per cent, and more frequently on the left than on the right side I find no justification for Stark's statement that incomplete doubling is usually unilateral, and complete doubling usually bilateral Complete doubling with two bladder orifices is rare compared to incomplete doubling (Huntington), yet, as several writers have pointed out, in the former cases the two ureters are bound tightly together in their lower third and a complete case might easily be mistaken for an incomplete case, unless the ureters are carefully dissected Bilateral complete duplication of the ureters is decidedly less common Gould[24] in 1903 reported two such autopsy cases and said that he could find but eight others in the literature, I have come across eight instances of this condition reported since 1903 (Kapsammer,[5] Wwendensky,[25] Rendu,[26] Huntington,[3] Furness,[27] Decherd,[28] Comolli[29] and Seelig[6])

Lichtenstern[30] reported a case diagnosed clinically as crossed ureters I know of no such post-mortem observation Kapsammer[5] has seen three cases which he interpreted as duplication of only the lower end of a ureter, simulating an *inverted* Y He records no radiographic demonstrations, or irrigation test such as he employed to prove absence of communications of the two pelves of a kidney with complete double ureters Embryologically such a condition is "contrary to nature" and most writers seem to think that it never occurs, but that for every ureteral opening in the bladder there is at least one renal pelvis that, when more than one, these pelves communicate rarely and only as the result of pathologic processes As many as six ureteral orifices in one bladder have been reported (Schewkunenko[31]), and five cephalic divisions of one ureter (Glazebrook[32]) When one searches for other possible stumbling-blocks, the various renal malformations and ectopias come to mind, and the occasional presence of a third kidney or the rare occurrence of but one kidney The many possible terminations of ureters, other than bladder, must also be remembered

In conclusion, if one will except the rare true cases of solitary kidney, when a blind ureter may be found on the other side extending up a short distance from the bladder, the inference is certain that for every ureteral orifice in the bladder there is a renal pelvis — perhaps more than one — and that these pelves do not communicate Also there may be present ureters terminating at their distal ends blindly or in some part of the genital or urinary tracts other than the bladder When a ureter crosses the median line to reach its associated kidney, that kidney is usually caudal to the one normally belonging on that side Of two ureters running from one kidney to the bladder, that with the more mesial and more caudal opening almost always corresponds to the upper pelvis of the kidney The history and general examination will offer valuable leads, but our surest means of diagnosing renal conditions accurately are careful comparative examinations of urines obtained by ureteral catheter, associated kidney function tests, and intelligent use of the *x*-ray In baffling cases urine from different levels of the ureter should be collected and it is best to inject the silver solution through a large catheter first in the renal pelvis, then at successively lower points in the ureter, before radiographs are made

40 East Forty First Street

ABSTRACT OF DISCUSSION

Dr **Hugh H Young**, Baltimore The surgery of the double ureter is very interesting and complex and frequently leads us into a wrong diagnosis I reported just recently in New York before another society an interesting double ureter case, in which when I first looked into the bladder I saw a diverticulum, but when the patient strained an immense prolapse came out, over which I found the ureter I operated and found, instead of a diverticulum, another ureter In another interesting case, catheterization showed pus issuing from the right ureter and clear urine from the left. I took an *x* ray plate which seemed entirely satisfactory and which showed a mass of stones in one kidney quite high up, on the other side I could see the apparent outlines of the kidney The patient was operated on and promptly died of uremia At autopsy we found that above the apparently healthy kidney was another kidney which had a big stone in it The *x* ray plate had just missed it The patient had two ureters on that side in the upper part, and a single one below

Dr **Edwin Beer**, New York I have seen during the last forty eight hours one of the most baffling cases that I have had the opportunity of examining The patient complained of chronic pyuria In 1902, this patient had been operated on for subphrenic abscess The abscess refused to heal, and a secondary operation was done by a New York surgeon, who removed the kidney which had been the source of the original abscess The sinus again refused to heal, and a partial ureterectomy was done The pyuria continued Subsequently to the operation a fecal fistula developed The patient was operated on for the fourth time as the fistula refused to close. The pyuria continued. There was a mild form of sepsis. A ureterectomy was done, but still the pyuria continued. The patient came to me about ten days ago. I washed the bladder out regularly, but the pyuria did not diminish. June 3 I cystoscoped him, and I found on the right side a ureter 25 cm long, full of foul pus. On the other side there was no sign of a ureter, but an enormous pouch. At first I thought this was a case in which the surgeon had not taken out the ureter, although he had operated for the ureter on two occasions, but on further consideration I am forced to conclude that the patient must have had a double ureter. Another case bearing on the same question was a patient with a double ureter which we proved on the cystoscopic table. One ureter was closed; mesial to the ureter there was a tiny point from which indigo carmin escaped. The second ureter was 37 cm long, and at operation we found that it led to the upper pole, which was normal, the lower pole being the seat of a hydronephrosis.

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[21] Von Fedorow Ztschr f Urol., 1910 pp 861 860
[22] Bottomley Ann Surg. 1910 p 597
[23] Smith M Personal communication
[24] Gould Am Jour Med Sc., 1903
[25] Wwendensky Folia Urol., Leipsic 1911 vi 345
[26] Rendu Bull Soc méd d hôp de Lyon 1911 abstr in Ztschr f Urol., 1911 p 974
[27] Furness Case reported February 1912 to G U Section of N Y Academy of Medicine
[28] Decherd Am Jour Med. Sc. 1904
[29] Comolli Monitore Zool Ital Florence 1911 p 113
[30] Lichtenstern Ztschr f Urol 1908 p 974
[31] Schewkunenko Ztschr f Urol v 851
[32] Glazebrook Quoted by Dorland Surg, Gyn and Obst 1911 xiii, 303

DR. J. B. ROXBY, Swarthmore, Pa. An experience in the dissecting room for a period of years confirms the fact that a large percentage of double ureter cases are in existence without having been known. An interesting case was seen recently in which there was a double ureter on the left side, the larger ureter was draining a small segment of kidney, the superior portion, while the small ureter was draining the majority of the kidney substance inferiorly. The caliber of the pelvis of the upper kidney substance was very much greater than the caliber of the lower kidney substance.

DR. A. R. STEVENS, New York. Dr. Young's case of bilateral renal calculus was referred to in the paper, but I omitted it in the reading because of lack of time. According to various statistics, double ureter, either complete or incomplete, occurs in from 1 to 4 per cent. The latter figure is probably nearer the facts, and hence warrants thoughtful consideration of the subject and watchfulness for these anomalies. While one should be mindful of all the possibilities in a given instance, from the data afforded by radiographs taken after injection of argyrol or collargol in the ureters and pelves one may learn precisely the course and cephalic ending of each ureter. Indeed, in some cases thought to be anatomically normal the shape of the pelvis may warn the observer of an overlooked ureter.

AN OVERLOOKED FUNCTION OF BARTHOLIN'S AND COWPER'S GLANDS

D. T. SMITH, M.D.

LOUISVILLE, KY.

In the male and female of all the higher animals, in connection with the sexual system, are found two sets of homologous glandular organs, much of the importance of whose office seems hitherto to have been overlooked. These are Bartholin's glands in the female and Cowper's glands in the male.

The fact that Bartholin's glands supply a mucus for the lubrication of the entrance to the vagina during sexual excitement, and that Cowper's glands secrete a mucous fluid which acts in part as a vehicle for the seminal discharge has long been noted. But each has a supplementary office in connection with the discharge of the urine, to which, so far as I know, reference has never been made, though one of distinct importance.

Every one who has suffered with irritability of the neck of the bladder or the bulb of the urethra is aware that immediately after voiding the urine an intermittent contraction is experienced in these parts for several seconds, which then gradually fades away. Such contractions, no doubt constantly present in the healthy subject, are probably experienced by the whole class of mammals; they indicate a double function for the glands.

One of these functions has already been mentioned as being related to the requirements of procreation. The other relates to the protection of the mucous membrane of the vestibule and adjacent parts in the female and of the urethra in the male against the irritating action of the urine.

When the urine is passed the mucous membrane is in large measure swept bare of its free mucus, and this privation Nature set out early to remedy. In accomplishing her purpose she found ready to hand the before mentioned glands, already developed for the accomplishment of an important office in the way of facilitating reproduction. These glands, like all other animal tubes or hollow organs, have their walls constructed in part of an external layer of longitudinal muscular fibers and an internal circular layer, a plan of structure which seems to have come up from the worms.

As soon as the act of urination has ceased a contraction of the walls of these glands takes place, extruding mucus into the passages to take the place of that which has been washed away by the passing urine, thus protecting the denuded mucous membrane. The contraction of the gland walls is reenforced by that of the walls of the urethra in the male, and in the female, by the contraction of the muscles about the outlet of the vagina. It is probable, too, that in all cases a reflex stimulus is conveyed to the glands which causes an increase in the quantity of their secretion.

In the mare, the contraction on the spongy, yielding tissues within the sphincters is so considerable that the vulva becomes quite everted under its operation. In the females of many other animals a distinct intermittent protrusion of the vulva may be observed under similar circumstances.

In the practice of medicine this condition is often a matter of distinct importance. In a large percentage of males the secretion is poured out with sufficient copiousness to cause it to be discharged from the urethra as a stringy mass, and the cases are without number in which men have consulted their physicians about an imaginary spermatorrhea, or have shamefacedly submitted to be robbed by conscienceless quacks, when nothing worse was going on than a beneficent effort of Nature to protect the mucous membrane against irritation by the urine. To the advertising quack this delusion has proved to be a veritable gold mine, and if statistics could be gathered of the amount of money annually paid out to these gentry by uselessly alarmed multitudes, the sum would be found absolutely astounding.

Field of Prevention.—The more we study preventive medicine and sanitation the wider grows the field, until we find that our horizon is almost boundless being coincident with man's energies and ambitions and wherever he goes and whatever he does we must henceforth stand by his side and guide him safely. No longer can our efforts or duties be limited by the actual presence of disease entailing the necessity for cure or for prevention of spread. We begin with the cradle, and in ordering the proper diet, clothing, temperature, air and exercise for the young child and watching his eyes, teeth, ears, nose and pharynx, we give him a better start in life than his father had. We follow him through school with the same care and see that he does not overtax his growing muscular system at football, baseball, rowing, track or gymnasium. When he goes into business it is, or ought to be, our duty to see that the office building, store or factory is built ventilated and heated aright, to see that the workers in all trades have plenty of fresh air to breathe, do not work in cramped positions, are not allowed consumptive fellow workers, have good water to drink, have decent privies or water-closets, have time to eat their midday meals and not bolt them as some ravenous beast.—White in *Wis. Med. Jour.*

EFFECT ON LATER DEVELOPMENT OF SEVERE AND PROLONGED ILLNESS IN INFANCY *

THOMAS D PARKE, M D
AND
JOHN H EDMONDSON, M.D
BIRMINGHAM, ALA

This study was undertaken, in the absence of published data, for personal considerations of curiosity and interest, since each one of the patients has been attended through serious and prolonged illness involving inanition of decided degree No case that did not represent extreme conditions of illness and prolonged interference with nutrition has been selected Tables of average measurements from text-books of Holt and Koplik have been utilized for comparisons

Case 1—B S, a white boy aged 7 years 1 month, breast raised Ileocolitis at 13 months of age, temperature 104 on first day, bloody stools at frequent intervals, hopeless prognosis given family, by consultant, on fourth day, corneal surface lesion on fourth day, attributed to intensity of infection Illness extending over three weeks and convalescence attended by a marked degree of inanition lasting for another month

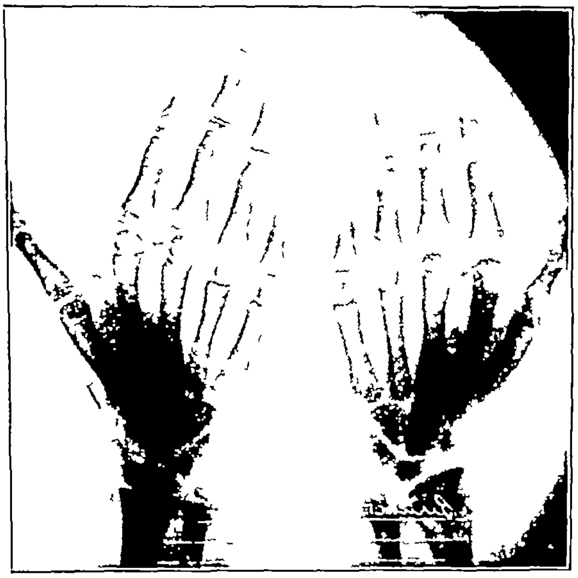

Fig 1—Case 1 The epiphysis of the ulna is undeveloped The semilunar is likewise undeveloped The wrist is below that which is normal at the age of 6¾ years Actual age of patient 7 years 1 month

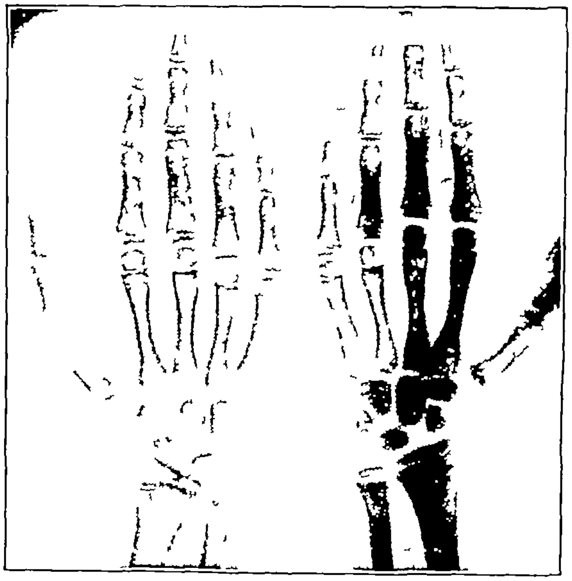

Fig 3—Case 4 All bones are present as expected for this age but not more developed than for 6¾ years Actual age of patient 9 years 3 months

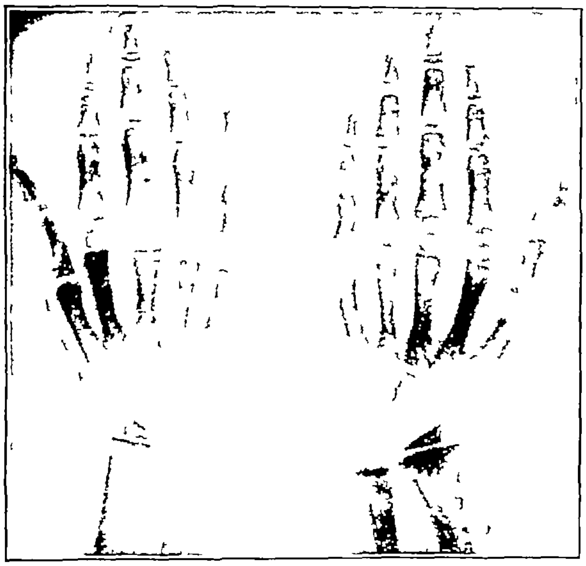

Fig 2—Case 3 The development of bones in the wrist is equivalent to that of the age of 3½ years. Actual age of patient, 6 years 10 months There are no epiphyses of the ulna and no scaphoid.

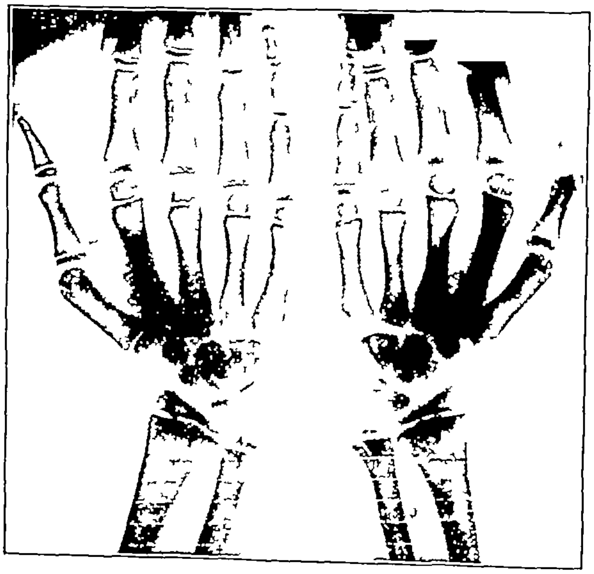

Fig 4—Case 5 The epiphysis of the ulna is much underdeveloped the development corresponding to that of the age of 6 years. Actual age of patient, 8 years 11 months See Plate 35 Rotch

Measurements, May, 1912

		Average of His Age
Height (inches)	50 1/2	46 1/2
Weight (pounds)	59	49 1/2
Chest (inches)	25	23 7/10
Waist (inches)	25 1/2	

Case 2—G C a white boy aged 6 years 1 month, breast raised At two years of age suffered from severe ileocolitis high temperature from beginning, severe nervous symptoms,

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty Third Annual Session, held at Atlantic City June 1912

manifested by screaming, insomnia of marked degree, self injury necessitating splinting of arms and finally restraint of the wrists, emaciation marked Convalescence prolonged Patient, a bright, vigorous child not yet of school age

Measurements, May, 1912

		Average of His Age
Height (inches)	47 3/4	44
Weight (pounds)	46 3/4	45
Chest (inches)	22	23 2
Waist (inches)	22	

Case 3 —S K, a white boy aged 6 years 10 months, breast raised Ileocolitis at 20 months of age, high temperature for a week with frequent bloody actions Development of meningitis and for ten days a fatal issue apparently inevitable Patient blind for a month after unconsciousness passed off Prolonged convalescence, emaciation extreme

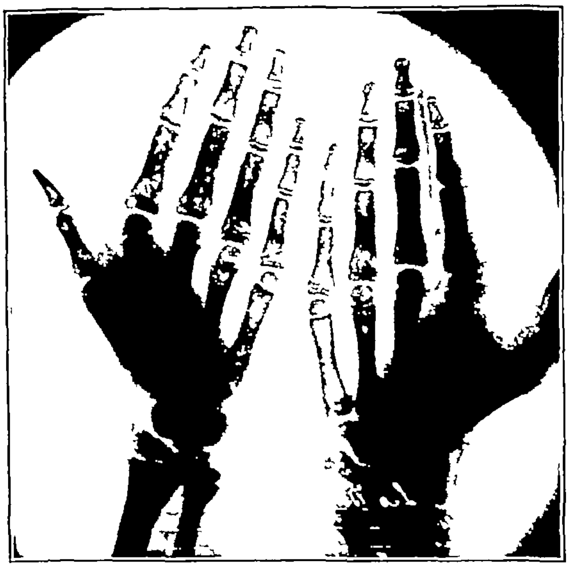

Fig 5 —Case 6 The development of the pisiform is three years ahead of the patient's age corresponding to that of 8¼ years (Rotch) Actual age of patient 9 years.

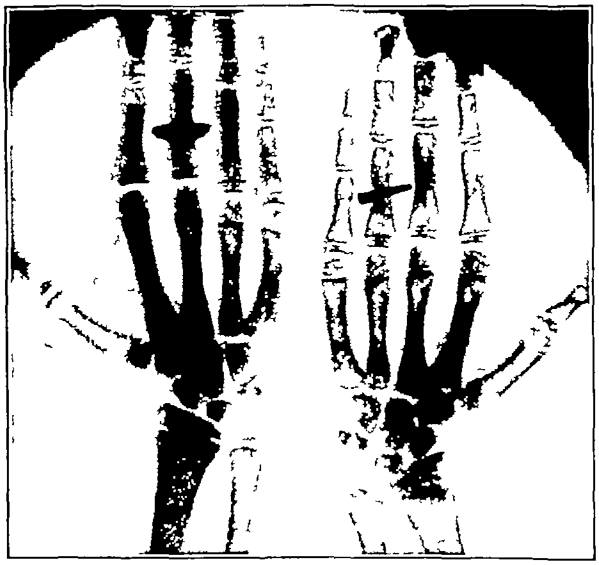

Fig 6 —Case 7 The epiphysis of the ulna is much underdeveloped The wrist corresponds to the normal wrist at 6¾ years. Actual age of patient 8 years 10 months

Measurements, May, 1912

		Average of His Age
Height (inches)	47 1/2	46
Weight (pounds)	47 1/2	49
Chest (inches)	23 1/4	23 7/10
Waist (inches)	22	

Case 4 —N W, a white boy aged 9 years 3 months, breast raised to 7 months Shortly after weaning was forced through illness of mother, ileocolitis developed, temperature not so high as in most of the other cases, but disease ran a prolonged course and emaciation was extreme, at 6 years patient developed endocarditis as the result of tonsillitis, and valvular lesion existed since He is bright and active and did well at school, he chafes under restrictions on fatiguing exercise, counseled by valvular leak Measurements, May, 1912

		Average of His Age
Height (inches)	53 1/2	50
Weight (pounds)	65	60
Chest (inches)	25	25 1/10
Waist (inches)	24	

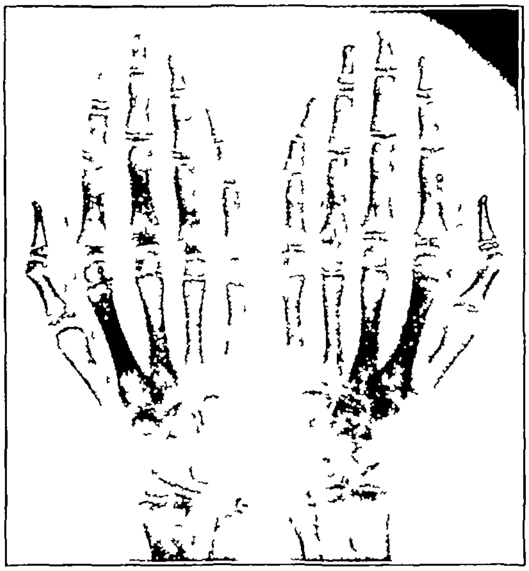

Fig 7 —Case 8 The development corresponds to that of slightly under 9 years based on lack of compactness and size Actual age of patient 9 years 11 months.

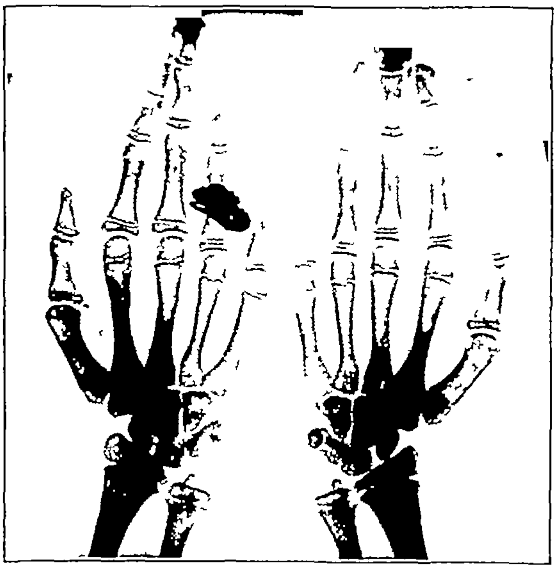

Fig 8.—Case 13 The styloid of the ulna is larger than normal The wrist is about normal Actual age of patient 10 years 5½ months

Case 5 —P P, a white boy aged 8 years 11 months, breast raised, first seen at age of 2¾ years, suffering from chronic dysenteric condition dating back nine months At age of 3 years bronchopneumonia, patient critically ill for a month, extremely emaciat [illegible] dition [illegible] been relieved For [illegible] d on account tonsils and adenoids have been removed in last six months, recommended on account of ear complication The child is doing well at school

Measurements, May, 1912

		Average of His Age
Height (inches)	52 3/4	50
Weight (pounds)	63	60
Chest (inches)	24 1/2	25 1/10
Waist (inches)	25	

Case 6—L S, a white boy aged 9 years, breast raised At 2 years of age severe attack of ileocolitis, fever three weeks, prolonged convalescence Emaciation extreme Metabolism affected for months Patient doing well at school

Measurements, May, 1912

		Average of His Age
Height (inches)	54 1/4	50
Weight (pounds)	67 1/2	60
Chest (inches)	27	25 1/10
Waist (inches)	27	

Case 7—C M, a white girl aged 8 year and 10 months, at 15 months of age severe attack of acidosis, with marked enlargement of the liver, labored breathing and prostration, inability to take any food for seven days, digestive capacity so affected by the acidosis that nutrition was seriously affected *for more than a month* Patient doing well at school, an unusually active girl

Measurements, May, 1912

		Average at 9 Years
Height (inches)	51 1/4	49 6/10
Weight (pounds)	65	57 1/2
Chest (inches)	24 1/2	24 9/10
Waist (inches)	24	

Case 8—H C, a white boy aged 9 years and 11 months, breast raised, brother of the patient in Case 2 At 11 months suffered from ileocolitis, complicated by acidosis, enlarged liver and labored breathing Patient extremely ill, colitis with malassimilation for a month following, with extreme emaciation Slow convalescence in a cooler climate. Patient active, bright, and high in his studies

Measurements, May, 1912

		Average at 9½ Years
Height (inches)	55 1/4	50
Weight (pounds)	69 1/4	60
Chest (inches)	26	25 1/5

Case 9—M A., a white girl aged 13¼ years, breast raised, at 16 months suffered an attack of ileocolitis ushered in by convulsions lasting for two days Continued high fever for two weeks, malassimilation due to intestinal condition lasting for more than six weeks Extreme emaciation, from age of 8 to 12, patient subject at times to attacks of acid intoxication of mild degree, tonsils removed at 12½ years

Measurements, May, 1912

		Average at 13½ Years
Height (inches)	61	58 1/2
Weight (pounds)	92 1/2	91
Chest (inches)	29	27 7/10

Case 13—L N, a white girl aged 10 years, 5½ months, breast raised, at 18 months of age suffered from ileocolitis complicated by acidosis, with enlarged liver, labored breathing and marked prostration After acidosis symptoms passed off colitis accompanied by high fever continued for two weeks Marked interference with digestion and assimilation continuing for more than a month after the child was taken to the shores of Lake Michigan, emaciation extreme

Measurements, May, 1912

		Average at 10½ Years
Height (inches)	57 1/4	51 7/10
Weight (pounds)	86 1/2	64
Chest (inches)	26	24 7/10

Cases 10, 11 and 12 are normal so far as concerns serious illnesses and were selected because they were above the average in vigor and appearance

The interpretation of the skiagrams, by Dr Edmondson, is given in the legends

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Idiosyncrasy in Gout.—In no disease does idiosyncrasy, that great stumbling block in therapeutics, make itself more evident than in gout —Samuel West in *Clin Jour*

THE CALORIC REQUIREMENTS OF BOTTLE-FED INFANTS *

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There still seems to be a great difference of opinion among pediatrists as to the necessity of carefully computing the number of calories per kilogram or pound weight in every bottle-fed infant The percentage method of feeding has so thoroughly embedded itself in the minds of American infant-feeders that the caloric requirements are usually entirely ignored or simply used as a check As a matter of fact, this expression, "used as a check," usually means that the feeder either prescribes the food symptomatically, his experience in feeding having been great enough to allow him to guess at the quantity and strength, or he has certain rules of his own to go by When the baby is not doing well, he reckons up the calories to see whether that individual child is getting a great deal more food than he needs or perhaps a great deal less Another expression which is frequently used at the present time and which I have myself been guilty of using in the past is "thinking in percentages" However much a physician knows about percentage feeding, and however successful he may have been in using it he cannot realize how much more accurate and successful his feedings would be if he would substitute for this or add to it "thinking in calories" It would hardly seem necessary to remind infant-feeders of the fact that the caloric requirements of adults have been worked out carefully and are used in a practical manner in the treatment of nephritis, diabetes, typhoid and many other conditions How much easier it is to reckon calories in the bottle-fed baby who is fed definite quantities of milk, cream, sugar or gruels, than it is the more complicated diet of adult life!

Another criticism that I would like to make of those who do not reckon calories (and they are becoming fewer every day) is that their remarks are founded on their inexperience with this particular method. They have not followed week after week the calories of the babies which they are feeding, and therefore they do not realize the help that it will give them They also seem to think that when they use the caloric method they do so to the exclusion of the digestibility and suitability of the food for any particular infant This, of course, is entirely untrue, because before the infant is given the number of calories necessary for his nutrition and growth all digestive disturbances must be overcome Even though his caloric requirements are much greater than are supplied in the food that we are giving him while overcoming the digestive disturbances, we always have in mind the number of calories which we shall eventually have to give before he will gain in weight.

It is also held by those who are not in favor of caloric methods that caloric requirements of the individual baby vary so greatly that it is impossible to determine definitely what any one child does need It was with this idea in mind that I started the work of this present paper My previous experience had taught me that some babies do require a great many more calories to gain on than others, and I sought some method of determining their individual caloric requirements I therefore measured the food consumed, retained and digested each day over a prolonged period in a fairly large number of healthy infants of different ages, weights and habits of activity, and in infants in the various stages of nutritional and digestive disorders In this way I attempted to find out the minimum amount of food on which a baby would thrive and gain in weight and the maximum amount which causes digestive disturbances or cessation of gain in weight I then classified these babies in a rough way for practical help in well on them and the source of error is less than when we use more complicated feedings Milk of which the fat-content was known was used The sugar, which from its high caloric value might easily be a source of error, was carefully measured in accurate containers which I furnished the parents I have used either cane-sugar or malt-sugar (dextrimaltose) It may be possible that the caloric requirements of infants fed with other foods than simple whole milk mixtures differ from those of my patients First I shall show a tabulated

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* Read in the Section on Diseases of Children of the American Medical Association at the Sixty-Third Annual Session held at Atlantic City June 1912.

TABLE 1—FEEDING RECORD IN CASE A NORMAL INFANT FED FROM BIRTH

Food			Calories			Weight						
									Gain in oz			
Sugar oz	Milk oz	Water oz	Total	Per Kilo	Per lb	Lbs	Oz	Kilos	Total	Per Day	Date	Age
0	2	8	40	12	6	7		3 2	0	0	5/23	3 days
¼	2	8	70	22	10	7		3 2	0	0	5/25	5 days
½	4	16	120	37	17	7		3 2	0	0	5/28	8 days
½	5	15	160	50	23	7		3 2	0	0	5/30	10 days
1	6	14	240	75	34	7		3 2	0	0	6/ 5	15 days
1½	8	12	340	103	48	7	6	3 4	6	1	6/11	21 days
1½	10	11	380	112	50	7	8	3 4	2	3	6/19	29 days
1½	14	11	460	135	60	8	1	3 6	9	1 5	6/25	
1½	14	11	460	128	57	8	10	3 9	9	1 3	7/ 2	
1½	14	11	460	118	54	9	8	4 3	14	2	7/ 9	
1½	14	11	460	107	48	9	8	4 3	0	0	7/16	
1½	17	11	520	121	54	9	12	4 4	4	8	7/21	2 months
1½	18	10	540	123	55	10	5	4 7	9	1	7/30	
1½	18	10	540	115	51	10	10	4 8	5	1 2	8/ 4	
0	18	10	360	80	34	10	10	4 8	0	0	8/ 6	
1½	18	10	540	113	51	11	1	5	7	1	8/13	
1½	18	10	540	108	49	11	4	5 1	3	4	8/20	3 months
1½	21	14	600	118	54	11	12	5 3	8	1 1	8/27	
1½	23	12	640	120	54	12	3	5 5	7	1 2	9/ 2	
1½	23	12	640	116	53	12	5	5 6	2	3	9/10	
1½	25	10	680	121	54	13	3	6	14	2	9/17	4 months
1½	25	10	680	118	51	13	11	6 2	8	1 1	9/24	
1½	25	10	680	110	49	13	13	6 2	2	3	10/ 1	
1½	25	10	680	110	49	14		6 3	3	4	10/ 8	
1½	28	14	740	120	54	14	11	6 7	11	1 6	10/15	
1½	28	14	740	110	49	15	2	6 8	7	1	10/22	5 months
1½	28	14	740	100	49	15	11	7 1	9	1 2	10/29	
1½	30	12	780	110	49	16	8	7 5	13	2	11/ 5	
1½	32	10	820	109	49	17	3	7 7	11	1 6	11/12	
1½	32	10	820	100	47	17	13	8 1	10	1 5	11/19	6 months
1½	28	8	740	91	41	18	4	8 3	7	1	11/26	
1½	28	8	740	89	40	18	12	8 5	8	1 1	12/ 3	
1½	28	8	740	86	39	19	4	8 7	12	1 7	12/10	
1½	28	8	740	85	37	20		9 1	12	1 7	12/17	7 months
1½	28	8	740	81	35	20	2	9 1	2	3	12/24	
1½	28	8	740	81	35	20	12	9 4	10	1 5	12/31	

TABLE 2—FEEDING RECORD IN CASE 2 A NORMAL CHILD FED FROM 1 MONTH OF AGE

Food			Calories			Weight						
									Gain in oz			
Sugar oz	Milk oz	Water oz	Total	Per Kilo	Per lb	Lbs	Oz	Kilos	Total	Per Day	Date	Age.
½	8	20	220	48	22	9	14	4 5	0	0	1/28	1 month
1	16	16	440	97	44	9	14	4 5	0	0	2/ 4	
1	20	16	520	110	47	10	6	4 7	8	1	2/11	
1½	20	16	680	123	56	11		5	10	1 4	2/18	
1½	20	16	580	116	53	11	6	5 2	6	9	2/25	2 months
1½	20	16	580	111	50	11	12	5 3	6	9	3/ 3	
1½	20	16	680	110	49	12		5 4	4	6	3/10	
1½	22	14	620	115	52	12	8	5 7	8	1 1	3/17	
1½	24	12	660	116	52	13		5 9	8	1 1	3/24	3 months
1½	24	12	660	112	49	13	4	6	4	6	3/31	
1½	26	12	700	117	53	14		6 3	12	1 7	4/ 7	
1½	26	12	700	112	49	14	12	6 7	12	1 7	4/14	
1½	26	12	700	104	47	15	4	6 9	8	1 1	4/21	4 months
1½	26	12	700	102	46	15	12	7 1	8	1 1	4/28	
1½	26	12	700	98	44	16	4	7 4	8	1 1	5/ 5	
1½	26	12	700	94	43	16	6	7 4	2	3	5/12	
1½	28	14	740	100	45	17		7 7	10	1 4	5/19	5 months
1½	28	14	740	96	43	17	8	7 9	8	1 1	5/26	

feeding sick and well babies For my experiments I selected babies living at home, whose mothers I could rely on for intelligence, accuracy and truthfulness Naturally most of these were private patients, as it is notorious that bottle-fed babies do poorly in hospital wards I myself examined the stools continuously in each case, and unless they were normal and there was no vomiting, the number of calories which they received was not considered of importance

I have used simple milk mixtures of whole milk, water and sugar, because such feedings are digested so much more easily than top milks The babies thrive as feeding record of four cases, and then give the results of the rest of my cases as a whole

CASE 1—Normal infant artificially fed from birth It will be seen that on the third day when it was determined that the breast milk could not be used, I gave a mixture containing no sugar but 2 ounces of milk and 8 ounces of water, making 10 ounces of food in twenty four hours This contained only 40 calories in twenty four hours, or 12 calories per kilogram, or 6 calories per pound the child weighing 7 pounds, or 3 2 kg The food was increased gradually there being no gain in weight until after two weeks, when with 1½ ounces of sugar, 8 ounces of milk and 12 ounces of water, the total calories had reached

340 or 103 per kilogram and 48 per pound During these six days from June 5 to June 11, the child had gained 6 ounces, or 1 ounce per day June 11, the weight being 7 pounds and 6 ounces, or 3 4 kg, the food was increased to 1½ ounces of sugar, 10 ounces of milk and 11 ounces of water, making the mixture which was nearly half and half milk and water Formerly this would have been considered an irrational food for a child 3 weeks of age This gave us 380 calories in twenty four hours, or 112 calories per kilogram, with a gain in weight of only 2 ounces in eight days, which was not so good as during the previous week when the child was getting only 103 calories, and therefore needs an explanation I find that babies who have apparently been more or less starved will at first gain on fewer calories than they really need, but if this food deficient in calories is continued, the gain in weight will cease Therefore the next week I increased the calories to 135 per kilogram or 60 per pound, with a gain of 1½ ounces per day or even a greater one kept up continuously until the two weeks preceding October 1 and October 8, when on 110 calories per day there was a gain of only 0 3 and 0 4 ounce a day, respectively From then on the child gained on a greatly diminished number of calories down to 81 per kilogram, or 35 per pound The reason for this is that the child was then over 5 months of age, and a very fat baby, weighing 15 pounds and 2 ounces, and at 7 months, 20 pounds and 12 ounces To summarize this case, my object was to find the minimum number of calories on which the baby would make a fair gain in weight, repeatedly allowing the calories per kilogram or pound to sink down to a point at which the gain ceased This procedure I followed in most of my other cases I found repeatedly that during the earlier months, a child will cease to gain on less than 110 calories per kilogram, or 50 per pound

CASE 2—Normal child fed from 1 month of age, because of the mother's death The weight was 9 pounds and 14 ounces,

TABLE 3—FEEDING RECORD IN CASE [illegible] SHOWING DIARRHEA WITH OVERFEEDING

Food			Calories			Weight			Gain in oz			
Sugar oz	Milk oz	Water oz	Total	Per Kilo	Per lb	Lbs	Oz	Kilos	Total	Per Day	Date	Age.
1	12	12	360	86	31	9	3	4 2	0	0	5 /6	2 months
1	17	17	460	109	50	9	6	4 3	2	3	5/13	
1	20	16	520	121	55	10		4 5	10	1 4	5/20	
1½	20	16	580	128	58	10		4 7	8	1 1	5/27	3 months
1½	24	16	660	140	63	11		5	8	1 1	6/ 3	
1½	26	14	700	140	63	11		5	0	0	6/10	Diarrhea
0	26	14	520	104	47	11		5	0	0	6/14	
½	24	16	540	108	49	11	4	5 1	4	6	6/21	
1	24	16	600	118	54	11	14	5 4	10	1 4	6/28	4 months
1½	24	16	660	122	56	12	8	5 7	10	1 4	7/ 5	
1½	24	16	660	116	53	13		5 9	8	1	7/13	
1½	24	16	660	112	51	13	5	6	5	7	7/20	
1½	28	14	740	123	56	13	12	6 2	7	1	7/27	5 months
1½	32	10	820	132	61	13	10	6 2	0	0	8/ 1	Diarrhea
0	21	21	420	68	31	13	8	6 1	0	0	8/ 6	
½	24	18	540	89	40	13	12	6 2	4	1	8/10	
1	26	16	640	103	47	13	12	6 2	0	0	8/14	
1½	26	16	700	113	51	14	5	6 5	9	1 3	8/21	

TABLE 4—FEEDING RECORD IN CASE 4 THAT OF AN ATROPHIC INFANT

Food			Calories			Weight			Gain in oz			
Sugar oz	Milk oz	Water oz	Total	Per Kilo	Per lb	Lbs	Oz	Kilos	Total	Per Day	Date	Age.
						6	14	3 1			3/28	2½ months
¼	5	20	130	42	19	6	14	3 1			4/ 1	
½	11	24	280	90	40	6	14	3 1			4/13	
1¼	12	24	390	126	56	7	8	3 3	5	6	4/21	3 months
1½	13	24	440	133	61	7	9	3 4	7	9	4/28	
1¼	12	20	390	114	52	7	9	3 4	0	0	5/ 4	
1½	16	20	500	147	66	8	1	3 6	8	1 1	5/13	
2	18	20	600	166	75	8	8	3 9	7	1 2	5/19	4 months
			Pertussis			8	8	3 9	0	0	6/16	
2	18	14	600	154	70	8	14	4	6	8	6/23	5 months
2	22	14	680	170	75	10		4 5	18	1 3	7/ 7	
2	26	14	760	169	76	10	10	4 8	10	1 4	7/14	
2	28	14	800	166	75	11	6	5 2	12	1 2	7/24	6 months
2	28	14	800	154	70	12		5 4	10	1	8/ 8	
2	28	14	800	148		13		5 9	16	1 2	8/17	7 months
2	28	14	800	135	62	13	12	6 2	12	9	8/31	
2	28	14	800	129	60	14	6	6 5	10	1 4	9/ 8	
2	28	14	800	128	56	14	1_	6 7	6	9	9/15	

It will then be seen that the food was unchanged for one month and therefore as the weight increased the calories per kilogram and per pound diminished until at the end of this time they got down to 107 calories per kilogram, or 48 per pound by July 9 The child was fed from July 9 until the 16th on 107 calories without any gain in weight The food was again increased to 1½ ounces of sugar 17 ounces of milk and 11 ounces of water, giving 121 calories per kilogram, or 54 per pound, with a gain of 4 ounces in five days, or 0 8 ounce a day, and the following week with the increase of 1 ounce of milk making 123 calories per kilogram or 55 per pound with the gain of 1 ounce per day Again the food remained unchanged for about one month (with the exception of two days when the sugar was left out through an error) until by the increase of weight the calories per kilogram had sunk to 108, or 49 per pound, when we got a gain of only 3 ounces a week, or 0 4 ounce a day This was a repetition of the diminished gain in the week previous to July 16 on 107 calories The following week the increase in calories to 118 per kilogram gave a gain of 1 1 ounces per day and this gain

and the child was put on one half ounce of sugar, 8 ounces of milk and 20 ounces of water, which gave 48 calories per kilogram and 22 calories per pound with no gain in weight The following week the milk was increased to 97 calories per kilogram, 44 per pound with no gain in weight The following week, with 110 calories per kilogram, and 47 per pound, there was a gain of 8 ounces, or 1 ounce per day This child then was kept on food representing more than 110 calories for nearly three months, until the week preceding April 21, when it had gained 5¼ pounds, or an average of over 1 ounce a day throughout this period It was then a fat, healthy baby of over 4 mounths of age, weighing 15 pounds and 4 ounces and, at this weight and age, gained on fewer calories Each week the food remained unchanged, the weight, as it increased, decreasing the number of calories per kilogram or pound, until in the week preceding May 12 the child had gained only 0 3 ounce a day on 94 calories per kilogram On increasing the calories up to 100 per kilogram, there was a gain of 10 ounces a week, or 1 4 ounces per day

This child will go on gaining on less calories as it gets older and fatter, until it will do well on about 80 calories per kilo gram, or 35 per pound As far as the feeding itself is concerned, it will be seen that at 3 months of age the child was getting two thirds milk and one third water with 1½ ounces of sugar added to the twenty four hour amount

Case 3—Diarrhea with overfeeding This child, 2 months of age, weighing 9 pounds and 3 ounces, did well, making good gains on 109 to 128 calories per kilogram, or 50 to 58 per pound The week preceding June 3, the calories were raised to 140 per kilogram, or 63 per pound, and the child made a gain of 1 1 ounces per day, and stood this number of calories for one week very well The following week, however, on the same number of calories, a diarrhea occurred We all know that a child will stand any abuse in feeding for a number of weeks sometimes, without succumbing to the effects of that abuse, so that it was not until the second week of this high caloric feeding that a diarrhea occurred By cutting out the sugar and not changing the food in any other way except to boil the milk, the diarrhea was overcome in four days On June 14, one half ounce of sugar was added to the diet, giving 108 calories per kilogram, or 49 per pound, and we got a gain of 4 ounces, or 0 6 ounce per day, following our period of starvation There was then a continous gain from June 21 to July 27, on food of 118 to 123 calories per kilogram, or 54 to 56 per pound At this time a food containing 132 calories per kilogram or 36 per pound was given, resulting in a diarrhea which was controlled in five days by cutting out the sugar and giving half milk and half water, boiled During this period there was a loss of 2 ounces in weight The sugar was then gradually increased and the child again began to gain on 113 calories per kilogram, or 51 per pound I do not mean to say that overfeeding in calories alone is always the cause of diarrhea, but I think that this case proves that it may be the sole cause in some instances At other times this child digested well the food of the same strength and quantity, and the sugar was never increased by 1½ ounces in twenty four hours, so that that may be eliminated as the cause of the diarrhea in this particular instance

Case 4—Atrophic infant This child, an emaciated, atrophic, *marasmic, decomposition baby, weighing 6 pounds and 14* ounces at 2½ months of age, was white, vomited a great deal, and in bad condition generally It did not gain until the vomiting was overcome by a dilute mixture containing little sugar and of low caloric value The week preceding April 21 it gained 5 ounces, or 0 6 ounce a day on 126 calories per kilo gram, or 56 per pound It will be seen that the food was still dilute, being one third milk and two thirds water, with only 1¼ ounces of sugar The following week increasing the sugar one fourth ounce and the milk 1 ounce raised the calories to 133 per kilogram, or 61 per pound, and there was still a greater gain of 0 9 ounce per day This small increase in the milk and sugar shows how much the calories per kilo gram may be increased by a slight change in the food in small emaciated babies, and therefore how important it is to reckon calories in all our babies, especially the very sick ones, if we do not want to overfeed or underfeed them The following week the food was reduced to 114 calories per kilogram, or 52 per pound, and the baby did not gain at all The next week on 147 calories per kilogram, or 66 per pound, there was a gain of 1 1 ounces per day The next week at 166 calories per kilogram it gained 1 2 ounces per day At this time this unfortunate baby got the whooping cough and vomited so much of the food that the reckon of calories was of no avail, but the food was kept the same throughout the period During this period, however, there was no loss in weight at all The week preceding July 7, the child had 2 ounces of sugar, 22 ounces of milk and 14 ounces of water, making 170 calories per kilogram, or 75 per pound, giving a gain of 1 3 ounces per day It was kept on this high caloric food without any digestive disturbances, the number of calories per kilogram was gradually decreased and there was a gain of 5 pounds and 8 ounces in two months, or considerably over 1 ounce per day The baby was then fat and continued to gain on 110 to 120 calories per kilogram for the rest of the time that I had charge of it

It would be useless to go on citing any more of my twenty five cases that I have followed in this way, because they all show practically the same results The average normal baby will do well on 110 to 120 calories per kilogram I do not consider these figures absolute, but they are at least a good guide if we will also consider the general well-being of the child, the appetite, vomiting, stools and sleep, but I would give more weight to the calories than to the symptoms, as they are far more to be relied on In many cases that I have had it is evident that some were much like Case 3 that I have shown you, in which, if we attempt to increase the calories above the infants' needs, we get these digestive disturbances As we all know, some babies have a tendency to diarrhea, some have a tendency to constipation and some to gastric indigestion Such babies must be kept on the lowest caloric value that will give them a gain in weight

It has long been known that atrophic babies require food of much greater caloric value It has been my experience in my other cases as in the one that I have tabulated that the much emaciated babies will require 160 to 170 calories, whereas those who are only moderately emaciated will require 130 to 150 calories If such babies show a tendency to diarrhea, I would not dare increase the calories so high as I have in the one that I have shown, but would be contented to have a smaller gain on 150 calories

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ABSTRACT OF DISCUSSION

Dr G R Pisek, New York I take issue with Dr Dennett, placing myself on the side of those men whom Dr Dennett criticized, those who do not believe in the caloric method of infant feeding A study of his charts shows that gain in weight was his guide to influence his variations in the caloric feeding We can all appreciate what there is of value in this method It tells us that a baby will not do well below a certain minimum and that it is in danger over a certain maximum number of calories per kilo

Dr. Fritz Talbot, Boston I have had the opportunity of examining the nitrogen content of cow's milk from different herds of cows and have found that it may vary 20 per cent Furthermore, the amount of fat in the milk of the different herds varied from 3 5 to 4 5 per cent There again was an error of 25 per cent Such figures as these are, therefore, only relative I use the percentages as well as the caloric means of feeding babies I feed the individual baby and not by rule of thumb The well babies that I see in private practice usually need about 120 calories per kilogram of body weight, whereas the babies that I see in hospital clinics need from 80 to 160 calories I believe the individual baby should be fed according to his peculiarities, using all the information we can command, and not by a single method

Dr Charles Douglas, Detroit I think that in considering this subject we should remember the age of these children, and notice that most of them were taken from an early age, we should not apply those figures to the marantic child or the child who has been damaged by feeding While Dr Dennett was talking, I was running over the figures, comparing them with what I have been accustomed to do for many years, that is, so much milk daily per pound of the child's weight Long before I commenced to use calories, which I use only as a check or measure, I had been in the habit of telling the mother that she could expect no gain in weight until she was able to give the baby each day so much per pound of weight As soon as we reach that point we find that the child will begin to gain The figures are exactly the same as I have been in the habit of using right along Whether one figures by percentage or by caloric method, the same conclusion is reached One is really therefore, a check on the other We sometimes see a child who can use only a small percentage of fat, we therefore have to run up high on sugar and protein. It is not well for us to give a diet according to any one system We need all the systems to measure our work and see that the child is given justice

Dr. John L Morse, Boston If I understood Dr Dennett I think that he said we should think in calories and not in percentages I cannot agree with that It seems to me that we should think in both percentages and calories, and if we are going to think of one first, we should think of percentages If we think in calories first, we put the cart before the horse What we really ought to do is to fit the food to the infant's digestion first, and then see if its caloric value is sufficient to cover the baby's needs It seems to me that all these things should be taken into consideration in feeding fat to the individual baby All my hospital charts have lines for calories per kilo just as for weight and percentages I have found that the average baby in the first year needs between 100 and 120 calories in order to gain satisfactorily Babies seldom hold their own on less than 70 calories per kilo, although I have seen babies that gain steadily on 50 calories per kilo I do not know how they do it I have seen others that were underfed on less than 160 calories

Dr H D Chapin, New York The main objection to the use of the caloric method is that it overlooks the principal thing we are after in managing the baby, its growth The caloric method is of value only as a check If we are going to make it the essential thing, we can make up a food of suet and water and get our calories right, but the actual food will be all wrong In the young the main factor is not heat and energy producing food, but growth producing food A system of calories is much more valuable in adults in estimating food values than in babies and young children

Dr R H Dennett, New York I do not mean to put forth this theory of feeding as the only one to go by I was misunderstood in a good many ways I said that we should think in calories as well as in percentages, if we are using the percentage method Of course, everyone recognizes that there is more than one successful method of infant feeding, and we must not have our minds entirely on calories or entirely on any one thing That is evident In regard to Dr Talbot's criticism of the assumption of the fat content, the error in the number of calories per kilo would be very small I started to estimate the error, say that we did differ in our fats 0 5 of 1 per cent, the error in calories for a baby of this age and weight would be very small indeed, because of the matter of division, just as in making up percentage feedings the error in percentages is very small in the end As to Dr Talbot's remarks about the badly damaged child, Case 4 was one of the worst cases I have ever had the privilege of treating

MOVING PICTURE ILLUSTRATIONS IN MEDICINE

WITH SPECIAL REFERENCE TO NERVOUS AND MENTAL DISEASES *

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For the past five years I have been interested in the taking of moving pictures of nervous and mental diseases until at the present time I have practically completed my work in both these fields, having about 10,000 feet of film of the various diseases to which this particular specialty lends itself Inasmuch as I have gained considerable knowledge not only in the taking of these pictures, but also in their demonstration and uses, I thought that it would be of some value if I recorded my experiences

I shall first discuss the method of taking these pictures, secondly the various diseases and subjects which can be photographed, thirdly, their availability for teaching purposes, and lastly, their scientific value

TAKING THE PICTURES

Necessarily the greatest objection to the use of this method of teaching is the expense involved, but this can be greatly lessened if advantage is taken of some points In my first attempt the subjects consisted of hemiplegics, diplegics and other patients in whom an attempt was made to demonstrate the gait, station, etc In this I used four or five hundred feet or more for one subject, which was entirely too much, for in the average moving picture machine the rate of illustration is one foot per second and I have found that it is vastly better to show for about a minute a particular gait or patient in whom there is only one thing to demonstrate using about sixty feet, than to exhibit for four or five minutes, because the onlooker becomes tired of seeing the same thing for more than that period I have now adopted the plan of even cutting down that time by using twenty or thirty feet For example, I illustrate the catatonic form of dementia praecox by having the patient appear on the screen for less than half a minute It is vastly better to have many subjects for twenty feet at a time than to show one patient, no matter how good, for a greater length of time In dementia praecox twenty-six patients are used to illustrate the disease

Then again, experience teaches just what is illustrative In one's enthusiasm one may have a subject photographed at length only to find that many of the pictures when thrown on the screen are of no value In addition, a great deal of patience and ingenuity has to be exercised to make the patient perform unconsciously during the time that the pictures are being taken, as in photographing various forms of tics Sometimes, however, it is in the insane patient that the greatest care needs to be exercised I remember that when attempting to take photographs of a number of paranoiacs the camera man came near being assaulted and having his instrument destroyed One curious experience I had with epileptics The superintendent of the colony who very kindly placed his material at my disposal selected eighteen of the many hundred epileptics, every one had fits daily, some of them hourly We placed these patients in the sun with the camera trained on them ready to take a photograph the instant a spasm was manifested, and yet for three hours not a single patient had a sign of a spasm and it was necessary to come the following day before we were able to obtain the photographs Even under these circumstances it was difficult to obtain the beginning of epileptic fits

DISEASES WHICH CAN BE PHOTOGRAPHED

So far all my pictures have been either of the nervous or of the insane Nervous diseases lend themselves particularly to motion photography because of the gaits, tremors, convulsions and different types of tics and spasms In the organic diseases it is easy to illustrate the method of obtaining reflexes, spastic and ataxic gaits, ataxias, tremors, etc I have excellent photographs of all these and also of the different diseases In some, like syringomyelia, in which there is no particular gait or station to be illustrated it is possible to show the patient's atrophy, contractures and trophic symptoms, at the same time outlining disturbances of sensation, which can be marked on the patient with different colored chalk for the different forms of sensation, it is even possible for example in white patients, using charcoal over areas of loss of pain and temperature sensation, to indicate by words within this area in white what particular sensation is lost

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association at the Sixty Third Annual Session held at Atlantic City June 1912

Of the functional diseases, the various tics, tremors and convulsions can be beautifully illustrated Insane diseases are not so applicable for motion photography excepting in types like catatonia, mania and paresis, and in the facies of the various kinds of insanity

So far as I know no attempt has been made to develop motion photography in the other specialties, but there is no reason why this should not be done In diseases of the eye the different ocular palsies and pupillary changes can readily be shown, while in diseases of the ear it would be easy to illustrate nystagmus from aural involvement These subjects, of course, have a direct relation to neurology

In children's diseases it would be interesting to photograph whooping-cough and meningitis, even the different exanthems could be shown at various stages by color photographs The discussion by the lecturer in demonstrating the pictures materially helps in their appreciation It would be interesting to demonstrate the method of doing lumbar puncture Again, what would be better in the present crusade of public health than to illustrate the right and wrong methods of bathing, dressing and clothing children, and other hygienic factors?

As a matter of fact, moving picture illustrations are already employed by public health bureaus in different states, notably in Louisiana, where the head of that department employed motion picture photography to show the menace of such diseases as small-pox, typhoid fever, etc

In no branch of medicine, with the possible exception of neurology, can motion photographs be of so much value as in bacteriology For some years photographs have been in existence showing the movement, growth and characteristics of different types of bacilli

In general medicine they could be employed to illustrate pyloric spasm, movements of the chest in various heart and lung diseases and the abdominal movements in different diseases of the viscera In surgery and obstetrics it would be easy to illustrate some types of operation One of the first uses of moving pictures in medicine was to illustrate an operation by a French surgeon These pictures were taken about 1902 and were shown in different parts of Europe, eliciting a storm of criticism because the operation was of an obstetric character Unfortunately a type of these pictures has fallen into the hands of unscrupulous individuals and are being shown as motion picture curiosities One of my naval friends on his return from a cruise in South America told me that he had seen such films in a public hall.

VALUE OF MOTION PICTURE FOR TEACHING PURPOSES

To my mind no new development in recent years for the teaching of medicine is of so much value as the use of motion pictures I am aware that some will disagree with me, the only answer I can make is that they have not used such means In my course in nervous diseases to medical students I now regularly employ these pictures If, for example, I wish to discuss epilepsy I first lecture on the disease and then show the reel which contains the different types of fits The reels are arranged according to subjects As a case in point, take the subject of epilepsy How many medical students or physicians are there who have seen typical jacksonian convulsions and different forms of epileptic spasms, such as I am able to show by these pictures? I remember that during my course as a medical student I did not see a fit, and it was not until I became a resident physician at the Philadelphia Hospital that opportunity was given me to observe one

Even in the commoner diseases such as hemiplegia, diplegia and the different types of spastic paralysis, etc, examples of which can always be found in clinics, there is something peculiarly impressive in their being shown by means of motion photography In large cities like Philadelphia where we have the unparalleled advantage of the wards of the Philadelphia Hospital we are always able to produce many examples of this type and I do not deny that it is better for the student to see the actual patient, yet what teacher is certain that the student pays attention when he lectures and shows these patients? On the other hand, the very novelty of moving pictures and the nature of the exhibition compel the student to pay attention I have, for example, shown particular types of patients to students and quizzed about them later Then I have shown other patients by means of motion photography, and have always found that the impression of the latter is much greater and that the student never forgets what has been so indelibly impressed on his visual memory

Is there anything that a teacher appreciates more than to be able to produce at a moment's notice examples of various types of choreas, athetoid movements, astasia abasia, muscular dystrophies, etc? I do not mean to say that I prefer to show motion pictures rather than the actual patient, but I do say that it is well to be able to show patients as they are and again to reproduce them by photographs

USES OF MOTION PICTURES FOR ILLUSTRATIVE PURPOSES

The first attempt to illustrate text-books by motion pictures was that made in my article on "Nervous Diseases" in Anders and Boston's "Medical Diagnosis" In this, hemiplegia, locomotor ataxia, paralysis agitans and spastic gaits are demonstrated I cannot say that I am entirely satisfied with the results I have found since the publication of these pictures that it is necessary to have considerable explanatory legends so that the reader may understand the pictures more fully This, however, is simply a beginning

It is also possible to use motion photography to illustrate a scientific article It occurred to Dr C K Mills and myself that it might be interesting to study emotional expression by this means Our method was first to illustrate normal crying and laughter, using actors for the purpose, who laughed and cried and attempted to do so on one side of the face This was because we had a patient in whom there was loss of emotional expression on one side Then we photographed patients who had either involuntary laughing or crying in such diseases as pseudobulbar palsy, multiple sclerosis, paralysis agitans, astasia abasia, hysteria, chorea, etc The results were surprisingly striking These pictures were shown before the College of Physicians of Philadelphia

SCIENTIFIC VALUE

1 To my mind, the greatest value of moving pictures is to record diseases so that future generations of medical men may have a permanent record

2 In the future we shall be able to exchange films of the different types of the same disease occurring in different countries

3 Rare cases may be permanently recorded In the nervous wards of the Philadelphia Hospital a patient presented the [illegible] symptom [illegible] inability to laugh on one side [illegible] able [illegible] facial muscl[illegible] oth[illegible] died and h[illegible]

This case was the basis of a paper by Dr Mills, under whose care the man was I believe that this is the first occasion in medicine when it was possible to give a history of the case, show the specimen and at the same time illustrate by motion pictures what the patient suffered from during life I quote this only as an example

4 These pictures are of the greatest scientific value because they furnish a new means of detection I have, for example, a photograph of a man with jacksonian convulsions in which the fit starts in the right corner of the mouth and takes in successively the right side of the face, eyes and eyelids and then the muscles of the right hand and then the whole right arm Ordinarily a convulsion of this type is so rapid that there is little opportunity to make extensive observations In the showing of these pictures on the screen the size of the subject is greatly enlarged and it is most interesting to watch the succession of muscular twitching and to show the movement of both eyes eyelids and brow I have never seen a better demonstration of the fact that the unilateral cortical area controls the movements of both eyeballs, but the interesting part is that the eyeball on the side of the convulsion and also the eyelid and brow move more than the corresponding parts on the other side Even, for example, in the taking of such a common sign as the knee-jerk, while we have been aware that there is a perceptible lapse of time between the striking of the patellar tendon and the forward movement of the leg on the thigh, yet this point was never permanently impressed on me until I saw a motion picture reproduction, when it was so obvious that I could not help but notice it, and so it is in many other signs and symptoms As a matter of fact, I have become so impressed with the value of enlarged reproductions of signs and symptoms that I am now in the habit of having all the rare diseases and some of the commoner signs and symptoms photographed

It is my pleasure to state that were it not for the generosity of Mr Sigmund Lubin of Philadelphia it would have been impossible for me to do this work.

2030 Chestnut Street

POSSIBLE TRANSMISSION OF POLIOMYELITIS THROUGH THE DOG

HENRY F LANGHORST, M.D
ELMHURST, ILL.

Among the many theories advanced as to the method of transmitting the contagion in acute anterior poliomyelitis, another may be permissible Those theories which regard dust and flies as the agents of transmission have received the most attention Recently, Rosenau has proved that the stable-fly (*Stomoxys calcitrans*) transmits the virus in the same manner in which the mosquito inoculates its victim with malaria, and his work has been confirmed by Anderson and Frost[1] This is an important step toward the solution of the mystery, but it is not a complete solution for there must be other methods of transmission The disease exists in the winter months in the absence of dust and flies Many cases have appeared in Norway in the winter, and isolated cases spring up in our country from time to time

Basing my contention on the recent findings relative to the transmission of infantile paralysis, and on the knowledge gained from a few of my cases, I wish to advance the following

Poliomyelitis is undoubtedly transmitted to man through more than one intermediary We know one to be the biting fly We also know that the monkey may harbor the infection for some time after being a victim of the disease, and thus be a carrier The biting fly attacks animals and transmits the contagion The dog is subjected to the bite of this fly and may become infected The dog may contract the disease in one form or another, and be an active carrier of the virus for some time

Dogs are numerous in the countries that have suffered most with poliomyelitis, dogs are also more numerous in country districts, where the disease is most prevalent I consider these facts significant, especially in connection with two cases in my practice in which dogs may have been the agents of transmission

REPORT OF CASES

Case 1—The patient, aged 35, was a man of good habits and athletic build He was married and had one child Previous history was negative, with the exception of what I shall mention later He was taken with a severe cough and sore throat about one week before paralytic symptoms appeared He continued his outdoor work of driving a wagon, which was arduous, at that time, on account of the extreme cold and snow The symptoms developed rapidly, he felt weak in his limbs one afternoon, and that evening, after going to the toilet, he was unable to return without assistance I saw him a few hours later and found him completely paralyzed He was gasping for breath and was intensely cyanosed, his legs, arms, abdomen, chest, neck and throat were paralyzed He spoke with great effort and was unable to swallow, his eye muscles were intact and their reflexes were normal. All of his other reflexes were absent, sensation of heat and cold was normal, only slight pain was present on pressure over nerve trunks, he could locate and differentiate between pin pricks with the sharp and the blunt end. The sensorium was clear the patient was in good spirits and had no sense of fear Loud bubbling râles filled his chest and he was continuously making ineffectual efforts at coughing, to try and bring up the mucus that was choking him His vesical and rectal sphincters were tonic. Pulse was 130, temperature 100, respiration 45

By compressing his thorax, and by fixing the diaphragm (using pressure over upper abdominal region) we were able to help him to expectorate considerable mucus of a frothy nature At times the respirations were so labored and the cyanosis so urgent that artificial respiration was resorted to, and kept up for hours at a time Dr Peter Bassoe saw the case, in consultation, and he favored the diagnosis of acute anterior poliomyelitis but also considered the possibility of its being Landry's paralysis On account of the increasing dyspnea, Dr Richter, who had been using an improved pulmotor (made from a vacuum cleaner) was called in, to use his apparatus This was used with good results, and was alternated with the Sylvester method Atropin, strychnin, caffein and camphor were used hypodermatically, normal salt solution was used by rectum by the drop method. The urine contained no albumin, and the examination of the sputum showed many leukocytes, and, among other pus organisms, Pfeiffer's *bacillus* After the third day the patient was able to move his hands and legs slightly, but after five days of severe suffering he became delirious, and on the sixth day died

From the history I learned that the patient's dog had been sick about two or three weeks before, and was unable to stand on its hind legs The patient fed the dog and cared for him The patient remembered that he had a few scratches on his hand and that on one or two occasions, the *dog* licked his hand Flexner has *shown that* the nasal mucosa is one of the points of egress of the virus If the dog had been *inoculated* with the virus at some time and had not immediately contracted the disease he may have been a carrier and not contracted the disease until his vitality was lowered by living in a kennel in the cold weather The dog could have inoculated his master with the secretions from his nose and mouth

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[1] Transmission of Poliomyelitis by the Stable-Fly (*Stomoxys calcitrans*) editorial The Journal A M A Nov 2, 1912 p 1627

Case 2—The patient, a boy of 6 years, was brought to my office Aug 9, 1912, to be treated for a bite inflicted by his pet dog I saw him about an hour after the injury and applied a 1 per cent solution of formaldehyd and then used tincture of iodin The wound healed nicely The boy then accompanied his parents on a trip to Canada, leaving here August 23 While in Canada, on the 30th, the boy had a little fever and complained of his neck being stiff The family immediately returned to Elmhurst, arriving here September 1 I saw the boy at this time, he had a slight fever (temperature 101), and did not complain greatly He had pain in the back of his neck and in his head, and he felt weak His reflexes were present and he was able to stand and walk When I saw him the next morning he was paralyzed in all of his extremities, the chest and neck muscles were also involved The reflexes were absent Dr Abt saw the patient with me and called it infantile paralysis Dr D'Orsay Hecht also saw him a few weeks later and agreed to the diagnosis The boy is gradually recovering

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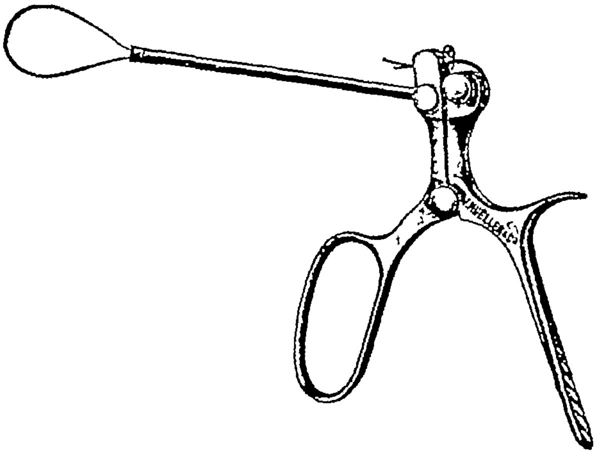
A NEW TONSIL-SNARE

W Likely Simpson, M D, Memphis, Tenn

The snare shown in the accompanying illustration consists of a large and a small tube and a handle set at a right angle to the tubes The small tube is attached to the posterior shank of the handle and is inserted within the large tube, which is attached to the anterior shank of the handle A small wheel is attached with the small tube to the posterior shank of the handle Both tubes are so attached to the shanks that they can move up and down As the instrument is opened the small inner tube has a tendency to move upward and the large outer tube downward, but both working together make a tube which moves neither up nor down



The wire sling, instead of being fixed to the small inner tube as in other snares, goes entirely through both tubes, around the small wheel at the posterior end of the small tube and forward to the attachment of the large tube with the anterior shank of the handle, doubling itself, where it is fastened with a screw This is a most important feature of this snare, since the instrument can thus be made quite small, it will, however, close entirely over a wire loop larger than would be necessary for any tonsil I would suggest the freeing of the tonsil from adhesions to the pillars or adhesions in the supratonsillar fossa, but I do not consider it necessary to dissect the tonsil from its normal bed in any way, when it is freed from adhesions, the tonsil and its capsule can be pulled through the snare without harm to the pillars If there are no adhesions, the tonsil can be entirely removed in its capsule by pulling it well through the snare shutting down on the base

The advantages of this snare are It is sufficiently powerful to remove any tonsil, it has a handle with a powerful grip set at a right angle to the tubes of the snare, which is to be preferred to a snare with a straight pull backward in the direction of the tubes One can exert the whole power of the hand if necessary, which is impossible in the ordinary snare The tubes being movable up and down, the instrument can be opened and closed with ease

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A COMPRESSED AIR OINTMENT APPLICATOR AND DISTRIBUTOR

Daniel W Layman, M D, Indianapolis
Attending Oto Laryngologist Indianapolis City Hospital and Indianapolis Orphan Asylum

Ointments as remedial agents to the nasal mucosa have not been extensively used, the nasal douche or spray being the more popular form of application, chiefly because remedial agents can be readily and easily applied in a fluid state Ointments have been used principally to protect the skin and mucous membrane at the entrance of the nostrils from being excoriated by irritating nasal discharges Occasionally they are used to protect the margins of a perforating ulcer of the septum or to stimulate granulation tissue to a more healthy action It is certain that a greater quantity of active agents can be delivered to the nasal mucous membrane and can be retained for a longer period in ointment form than in the fluid state

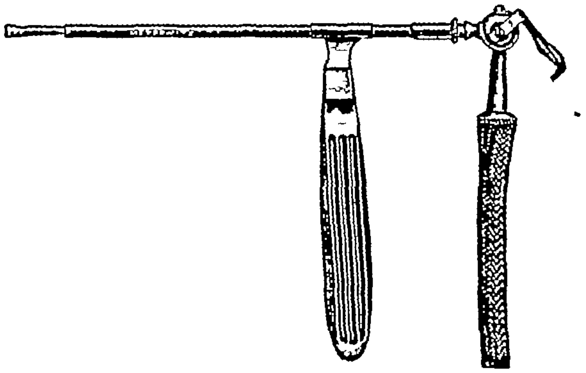


Fig 1—Compressed air ointment applicator and distributor

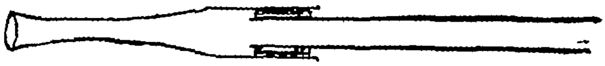


Fig 2—Glass tip fitted firmly over end of cannula by rubber tubing

The objection to the use of ointments in the nose is the crude and inefficient methods of application When pressed from a conical tube, the ointment is not carried beyond the anterior nasal chamber When applied with a cotton wound applicator (the method mostly used by rhinologists), the ointment is difficult to apply, as it adheres to the cotton closer than to the mucous membrane At best, the ointment can reach only a limited area in the upper nasal chamber, and cannot reach the greater part of the ethmoid region and the area included in Ballenger's "vicious circle"

For the application of ointments to the nasal mucosa I have devised an instrument by means of which the ointment is applied and distributed by compressed air This instrument (Fig 1) consists of a metal cannula with a handle, or holder, and a glass tube The opening of the cannula at the handle end is made to receive the tip of a compressed air cut off In the latest model (Fig 2), a glass tube is made to fit snugly over the other end of the cannula by means of a piece of rubber tubing The tube is about 2 inches in length, and is made of glass for cleanliness and in order to gauge accurately the amount of ointment to be used The tip is flaring [illegible] like the end of a blunderbuss With this [illegible] application of ointments to the nasal mucosa [illegible] dure [illegible] of many of the small [illegible] t into of the glass tube When the ointment tube is thus inserted, as much of the ointment as is desired is deposited in the glass tube by pressure with the fingers A blast of air of 15 or 20 pounds' pressure is passed through the cannula, from which it shoots the ointment to the parts directed, applying and distributing it over a considerable area of mucous surface and into small recesses or openings where the cotton wound applicator cannot reach

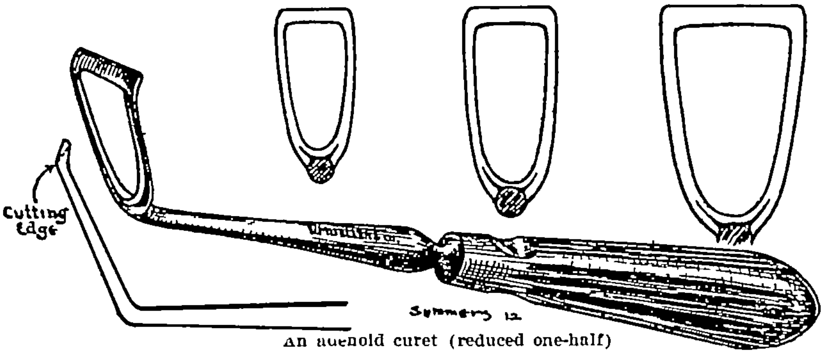
Nasal medication in ointment form is becoming more popular with rhinologists Text books on diseases of the nose and throat recommend ointments as valuable remedial measures If any instruction is given as to application, it runs as follows "Insert the elongated tube into the nostril and press slightly, or apply on pledget of absorbent cotton in the usual way"

The instrument I have described has been worked out to improve on this old method

AN ADENOID CURET

Greenfield Sluder, M D, St Louis

The accompanying pictures show the form of a curet the cutting edge of which is further removed from the shaft than in any curet at present made, so far as I know I designed it for use in throats (1) in which the distance between the hard palate and the rostrum of the sphenoid is much greater than the average and (2) in which there is a considerable excavation of the space between the basilar process of the occiput and the atlas When this space exists it may harbor a considerable amount of lymphoid tissue which cannot be removed by any of the curets of the usual form The upright portion of this one is tilted backward to an angle of 120 degrees, which permits it to reach upward and backward into this space In using it for this purpose I begin by holding the shaft against the upper incisors and hard palate



An adenoid curet (reduced one-half)

I have found that this instrument frequently serves well in removing tissue from the fossa of Rosenmüller I have three sizes

3542 Washington Avenue

The Triumph of Hygiene—For centuries man has tried to turn back, or at least to control disease by cure, yet knowing since the days of the creation of the mythologic Hygeia that prevention was the rational course At no period in history has this truth been more forcibly shown than in the last quarter century by the triumph of hygiene over yellow fever In connection with that disease therapeutics bore no burden Not a single medicine in all materia medica had the least effect Prevention, and it alone, has abolished yellow fever And this broad application of hygiene to the masses brings wholesale health And it should be noted that, as with typhoid fever, the prevention of one case prevents three cases of other diseases Business has profited greatly by this triumph of hygiene over yellow fever, and government and morals and all other elements of civilization also—J N Hurty in *Am Jour Public Health*

Therapeutics

DISTURBANCES OF THE HEART

(Continued from page 2257)

TREATMENT OF BROKEN COMPENSATION

The consideration of this subject will include the following topics

A. Hygiene
B Diet
C Elimination
D Physical measures
E Medication
    1 Cardiac Tonics Digitalis, strophanthus, caffein, strychnin
    2 Cardiac Stimulants Camphor, alcohol, ammonia
    3 Vasodilators Nitrites, iodids, thyroid extract
    4 Cardiac Nutritives Iron, calcium
    5 Cardiac Emergency Drugs Ergot, suprarenal active principle, pituitary active principle, atropin, morphin, and also some of the drugs already mentioned.

A HYGIENE

Of all treatment for broken compensation or dilated heart nothing equals rest in bed Sometimes it is the only treatment that is needed The rigidness of this rest, the length of time that it should endure, and the period at which relaxation of such rest should be allowed depend entirely on the individual patient, no rule can be established Most of the symptoms must disappear before exercise is allowed Perhaps a not infrequent exception to the rule is when cardiac weakness, generally a myocarditis, develops in a patient after 50 It is not always wise to keep such a patient in bed, he may be rested and his exercise greatly restricted, but sometimes it is difficult to get him out of bed if he is kept there any length of time

Fresh air, sunlight and anything else that makes the bedroom attractive and cheerful are essential and will aid in the recovery The kind of nurse that is needed, trained, untrained, or a member of the family, and the amount of company or entertainment that the patient shall have must be entirely decided for the individual patient The patient must be distinctly individualized and the proper measures taken to give mental and physical rest, to prevent excitement worry, melancholia and depression, and to improve the general nutrition of the body as well as the condition of the heart

Each occurrence of broken compensation in valvular disease causes another attack of cardiac weakness to occur with less excuse than before, and several serious attacks of broken compensation mean before long the loss of the heart muscle's ability to recover, so that permanent dilatation occurs

B DIET

The food given should be just sufficient for the needs of the body, the patient should not be overfed or underfed Any large bulk of food or liquid should not be given Pressure on the heart causes discomfort and is therefore inadvisable Food that causes flatulence should be avoided Theoretically the patient should receive a little meat, an egg or two, cereal or bread, a small amount of simple vegetables, a little fruit, often milk, a sufficient amount of non-effervescent water, perhaps a cup of chocolate or cocoa, a simple dessert, sometimes ice-cream, in other words, a varied, limited diet containing all the elements that are necessary to good nutrition The diet should be varied from day to day to encourage the appetite

It has for several years been recognized that a salt-free diet in dropsies due to disease of the kidneys is a valuable aid in causing absorption of such exudates and of preventing greater exudations For this reason a salt-free diet is often ordered in dropsies occurring in valvular disease Its value, however, is not so great as in kidney lesions, and if it causes hardship to the patient it should not be continued rigorously On the other hand, large amounts of salt should of course be interdicted

A most valuable aid in dropsies due to heart deficiencies is the so-called dry diet, which means that as little liquid as possible should be taken in order that the patient's blood may resorb the exudate in the tissues and not have the blood-vessels filled or overfilled with liquid from the gastro-intestinal tract When dropsy is present, or even when serious pendent edemas are present, the patient should drink as little liquid as possible with his meals and between meals should sip water rather than drink a large quantity of it This is one of the reasons that a large milk diet, even with kidney disturbance due to cardiac lesions, is generally inadvisable With cardiac or general circulatory weakness a large amount of liquid to flush out the kidneys and the whole system, so long ordered for all kidney defects or mistakes in metabolism, is a serious mistake

Whether it is better to give three or four small meals a day or to give a small amount of nourishment every three hours during the daytime must again depend on the individual and his ability to digest without fermentation and putrefaction or discomfort As previously urged, not too much fluid, even milk, though it digest perfectly, should be given, as the greater the amount of fluid the greater the amount of work thrown on the heart

C ELIMINATION

A patient who has developed cardiac incompetency has always imperfect elimination The skin, bowels and kidneys do not act sufficiently or well The circulation in the skin is sluggish The bowels are generally constipated, or there is diarrhea of the fermentative type The amount of urine excreted is generally insufficient and likely to be concentrated and show various signs of imperfect kidney elimination Therefore hot sponge baths, with perhaps warm alcohol rubs, are daily necessary Gentle massage, generally in the direction to aid the circulation, will benefit the skin If the skin is dry or in places scaly, oil rubs are of great benefit

The bowels must be moved daily and sufficiently, but there should be no watery purging allowed or caused If it seems advisable in the beginning of the treatment to give a calomel purge, it should be done, but such purging should ordinarily not be repeated, although occasionally a grain or two of calomel, combined with the vegetable laxatives needed, may act perfectly and without causing depression Saline purgatives, or even laxatives, are generally not good treatment when there is cardiac weakness The bowels should be moved by vegetable laxatives, as aloin, cascara sagrada, or some simple combination of either or both of these drugs

Diuretics are often not satisfactory in cardiac insufficiency The cardiac tonics that are given the patient, and the improvement of the heart from the rest in bed generally start the kidneys to secreting properly A diuretic administered when the kidneys are suffering passive congestion from cardiac insufficiency does not generally act, and is therefore useless If digitalis is administered, it will act as a diuretic, if caffein is deemed advisable, that will act as a diuretic Squills may be administered, if it seems best If for any reason the kidneys secrete less urine and become insufficient, the diet should quickly be reduced to a small amount of milk, cereal and water, and hot baths and local heat to the back should be inaugurated

D PHYSICAL MEASURES

Hydrotherapy is often of great value in restoring compensation by improving the surface circulation Sponging with hot, tepid or cold water, as indicated, will increase the peripheral circulation and the normal secretions of the skin.

When compensation is perfect, in valvular lesions, more or less frequent warm baths are advisable, and often relieve the heart by equalizing the circulation Cold sponging in the morning may be advisable, but may do harm when there is high tension, warm, not too hot, baths are of value Anything is of value that improves the peripheral circulation and prevents the extremities from being cold

The value of the Nauheim or other carbonated baths is perhaps often a question They have seemed in many instances to aid in improving compensation in such patients as have been able to go abroad for the treatment On the other hand, so many other regimens are ordered and inaugurated for these patients at these "cures" that it is hard to decide how much benefit the baths have really done At home the artificial carbonated or carbonic acid baths do not seem to be of great value Baths and bathing can do harm, and the decision as to which hydrotherapeutic measure shall be used and the extent to which they shall be used can be made only after careful observation of the patient by the physician

Gentle massage while the patient is in bed is of undoubted value, more vigorous massage is later often of value, provided there is no arteriosclerosis As the patient grows stronger and the circulation improves, the muscles are kept in good condition during the enforced rest by massage When properly applied, it promotes not only the venous return circulation, but also the lymphatic circulation, it often removes muscle aches and muscle tire and restlessness

While the patient is still in bed, various resistant exercises are of value, and should be begun These tend to prepare the patient for his later greater activities, in other words, the surprise to the heart when the patient begins to sit up and walk is not so great if he has previously taken these exercises. Later, when the patient is ambulatory he should by gradual gradation walk a little more about the house and take a few steps of the stairs at a time, until gradually he is able to mount the whole flight Later he should take outdoor exercise, and when his heart has become compensated for ordinary work, he should be given gradually graded hill-climbing with the idea of increasing his reserve cardiac power If it is found that these increased exertions cause him to have pain or a more rapid heart than is excusable, even after persisting for a few days, the attempt to increase this reserve power of the heart should [illegible] There is probably, at least at that [illegible] le myocarditis, although the [illegible] still more Pushing it to overexertion, however, will not accomplish improvement

Graded exercise was first used scientifically by Oertel and Schott, and has been for years designated by their names Modifications of their rigid rules are generally advisable

E MEDICATION

1 *Cardiac Tonics*.—Digitalis There is no drug that can take the place of digitalis in loss of compensation in chronic valvular disease It acts specifically for good, and it has its greatest success in the valvular lesions that cause enlargement of the left ventricle, on which it acts the most intensely It also acts for good on the right ventricle It has but little action on the auricles This is simply a question of muscle, the part that has the greatest amount of muscle will receive the greatest benefit from digitalis, and the parts that have the least, the least benefit The heart muscle is somewhat similar to other muscles, when we attempt athletic improvement in any muscle of the body we "train" by stimulating it moderately at first, and are careful not to overwork it, the object, then, is to train the heart muscle For this reason large doses of digitalis should ordinarily not be given to overstimulate suddenly an overworked and weak heart While in some instances it has been declared that digitalis should be rapidly pushed to the full extent and then dropped for a time, careful experience shows that this method is often not tolerated, sometimes does positive harm, and has at times seemed to hasten death

Another valuable activity of digitalis is in slowing the heart by action on the pneumogastric nerves A dilated heart has lost more or less of its regulating mechanism, this is the cause of its irregularity and its increased rapidity The action of digitalis in slowing the heart, giving it a longer rest, and preventing it from acting irregularly is of great value This prolonged rest or diastole of the heart allows the circulation in the coronary arteries to become normal, and the nutrition and muscle tone of the heart improves Digitalis also increases the blood-pressure, not only by improving the activity of the heart, but also by causing some contraction of the arterioles This feature of digitalis action in arteriosclerosis renders its use sometimes a question of careful decision The dose of digitalis under such a condition should not be large It may be indicated, however, and may do a great deal of good, and it does not always increase the blood-pressure

All preparations of digitalis deteriorate, and it is difficult to obtain from most druggists active preparations of digitalis, unless they have been freshly prepared If the patient is sufficiently ill to require the best action of digitalis, an active preparation should be obtained It was long supposed that the infusion presented activities that could not be furnished by the tincture of digitalis This seems not to be true The greater value of the infusion is generally because it is freshly made and active the tincture that had been used previously in a given case was old and useless, also most physicians give a larger dose of the infusion than they ever do of the tincture Owing to the uncertainty of the value of the digitalis leaves found in the various drug shops, however, and to variations in the preparation of the infusion, it is generally better to use a tincture of known character The beginning dose of such a tincture should generally not be more than 5 drops, and it should not be repeated more frequently than once in eight hours It is generally advisable, in two or three days, to increase this dose to 10 drops once in twelve hours, later perhaps to 15 drops twice a day, and still later to 20 drops once a day This amount may then be decreased gradually, if the action is satisfactory In other words, enough should be given to procure results, and then the dose should be brought down to what seems sufficient and best, administered once a day The frequency advised in the administration of this drug is because it is eliminated slowly Its greatest action develops a number of hours after it has been taken, and then the action lasts for many hours, the administration of digitalis once in twenty-four hours is perfectly satisfactory for many patients, and more satisfactory than any more frequent administration On the other hand, some patients do better on a smaller dose once in twelve hours This frequency is always sufficient

The most reliable preparation that we can obtain is probably digipuratum This may be obtained in tubes of twelve tablets, and is a very active preparation The advice has been given for patients with loss of compensation to receive four tablets the first day, three the second, three the third, and two the fourth day This, however, is generally an overdosage The most that should generally be given is one of these tablets once in twelve hours, and many times a most splendid action from their use occurs when but one tablet a day is administered

Another reliable preparation is digitol, a fat-free tincture of digitalis which is physiologically standardized and which bears on each package the date of manufacture The dose is 0 3 to 1 c c (5 to 15 minims)

Digitalinum, one of the active principles of digitalis, is not very satisfactory It may be given hypodermatically, but often causes irritation, and the proper dose, and its value are likely to be uncertain

Digitoxin, another active principle of digitalis, has been declared by some investigators to be harmful, and to be likely to cause serious disturbance of a damaged heart Other investigators have stated that it acts for good A preparation termed digalen, said to contain "amorphous digitoxin," has been largely used, and many clinicians have thought, with value The dose suggested by the instructions and by the medicine-dropper furnished with the sealed package is generally too large While it sometimes undoubtedly causes cardiac pain, so may every preparation of digitalis Digitoxin, and therefore probably this preparation, do not represent the whole value of digitalis, and in broken compensation digitalis itself, or some preparation embodying the majority of its activities, should be given Digitoxin, however, is often valuable in conditions of cardiac debility or slight weakening in patients who do not have dilated hearts or edemas The most satisfactory dose of digalen is from 5 to 10 drops once or twice in twenty-four hours

Digitalis should not be used when there is fatty degeneration of the heart, it should ordinarily not be used when there is arteriosclerosis, and very rarely, if ever when it is decided that there is coronary disease Whether digitalis should be used when there is considered to be much myocardial degeneration is a question for individualization One can never be sure that the heart muscle is so thoroughly degenerated that no part of it would be benefited by digitalis when compensation is lost, therefore, many times, especially if other drugs have failed, small doses of digitalis should be tried, to see if the heart will respond Large doses or frequent doses would be contra-indicated

The signs of overaction of digitalis are nausea, vomiting a diminished amount of urine, a tight, band-like feeling around the head, perhaps occipital headache and coldness of the hands and feet, or frequently of one extremity only, combined with a feeling of numbness The pulse is generally reduced to sixty or less a minute Such symptoms require that digitalis be immediately stopped They are the primary signs of cumulative action

While many patients with ordinary dosage of digitalis may take the drug for months and years without ever showing cumulative action, other patients show this, effect quickly They are likely to be those in whom the kidneys are not perfect The signs of such undesired action may develop slowly, as suggested by the symptoms just enumerated, or they may develop suddenly The pulse becomes rapid and irregular, the heart action weak, there is severe backache in the region of the kidneys, a greatly diminished amount of urine, or even partial suppression, severe headache, vomiting, cold extremities and shiverings

The treatment of such an undesired behavior of digitalis is, of course, to stop the drug immediately, give saline laxatives, hot sponging or hot baths, nitroglycerin and perhaps alcohol

Strophanthus Strophanthus cannot be compared with digitalis, except when the glucosid strophanthin, is administered subcutaneously or intravenously Strophanthus is given either in the form of the tincture, or as strophanthin It has been shown that in neither of these forms, when the drug is administered by the stomach, is the muscle of the heart or the blood-vessels much acted on In other words, compensation could not be restored by strophanthus In emergencies of serious cardiac failure strophanthin intravenously has been shown apparently to save life It acts quickly, and its power of stimulating the heart and contracting the blood-vessels lasts for many hours It is rarely, however, that the dose should be repeated, and then not for twenty-four hours, but during that twenty-four hours the patient may be saved until other drugs which act more slowly have been absorbed, or perhaps until the emergency has passed

There are many, however, who believe that they obtain considerable value from the tincture of strophanthus, and there seems to be no doubt that although strophanthus, given in the form of the tincture and by the mouth, may not increase the muscle power of the heart, it many times acts as a satisfactory cardiac sedative Under its action the patient becomes less nervous, the heart often acts more regularly, and the low blood-pressure may improve In other words, we should not be quite ready to discard the internal use of the tincture of strophanthus

The tincture of strophanthus readily deteriorates, and the preparation ordered should be known to be a good one

Caffein This should not be given or allowed, even in the form of tea or coffee, to patients who have valvular lesions with perfect compensation, as it is a nervous and cardiac stimulant and may cause a heart to become irritable It raises the blood-pressure slightly, acts as a diuretic, and hence is often of great value when used medicinally It should be ranked as a stimulotonic to the heart It increases its activity, but gives it a little more strength It will rarely slow a rapid heart, it will often stimulate a sluggish, slow heart, it may increase the irritability of an irritable heart As it is a cerebral stimulant, it should not be given late in the afternoon or evening, as it may prevent sleep

The most frequent form of caffein used is the citrated caffein The dose is 0 1 gm (1½ grains) two or three times in the early part of the day, or 0 2 gm (3 grains) once or twice during the morning A cup of coffee may be given the patient medicinally, as a substitute for the drug, an ordinary cup of strong coffee containing between 2 and 3 grains Other preparations of caffein may be selected if desired, or a soluble preparation may be given hypodermatically

Caffein is indicated if digitalis is contra-indicated or does not act satisfactorily, and the patient is not nervously excited, but perhaps is stupid or apathetic, and also when diuresis is desired

Strychnin This is a valuable stimulator and heart tonic when properly used It promotes muscular activity of the heart much as it promotes all muscular activities It awakens nervous stimuli and nervous transmissions to normal in all sluggish nerve functions If for these reasons the heart acts more perfectly, and the nutrition of the heart muscle improves it acts as a cardiac tonic Many times, by improving the action of the heart, and also by the action of the drug on the vasomotor center, the pressure in the peripheral circulation may be increased On the other hand, strychnin *in the low blood-pressure of serious illness, such as pneumonia, by no means always raises the blood-pressure*

It should not be forgotten that strychnin is a general nervous stimulant, especially of the spinal cord If it makes a nervous patient more nervous, or a quiet patient restless and irritable, it is acting for harm and should be stopped, just as caffein under the same conditions should be stopped Strychnin may cause diminished secretion of the skin This is not frequent, but it does occur It may prevent the patient from sleeping If such be the fact, strychnin is not acting for good in a patient who has cardiac weakness

Strychnin is a much overused drug It is now given for almost everything and during almost every disease It is true that the administration of strychnin is largely due to the evolution of the age in which we are now living We have ceased to purge and bleed and sweat, and to give large doses of aconite or veratrum viride, we have ceased to starve the patient too long, we have ceased to load him with alcohol to the point of circulatory prostration, and we have recognized that he must be braced from start to finish, strychnin is the drug that has been used for this purpose, and, as above stated, overused Strychnin given too frequently or in too large doses for a laboring heart can prevent its proper rest, the diastole is shortened and the relaxation of the heart is incomplete, its nutrition suffers, or even irregular and fibrillary contractions of a weak heart may apparently be caused While a large dose of strychnin, even to one-twentieth grain hypodermatically, may be used once in serious emergency when it is deemed the drug to use, a dose larger than one-thirtieth grain hypodermatically is rarely indicated, the frequency of such a dose should seldom be more than once in six hours, and a smaller dose of strychnin may act more satisfactorily

Strychnin is indicated when the heart is acting sluggishly and the contractions seem incomplete and when digitalis either is not indicated or is not acting perfectly Small doses of strychnin may aid such a heart during the administration of digitalis In many instances in which digitalis is contra-indicated, strychnin is of marked value This is typically true in fatty hearts, and may be true in arteriosclerosis, in which it of [illegible] not [illegible] the blood-pressure at all

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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[*For other information see second page following reading matter.*]

SATURDAY, DECEMBER 28, 1912

The large amount of space required for the Index in this issue necessitates the omission of some departments and the abbreviation of those used.

THE INDEX

The fifty-ninth volume of The Journal is indexed in this number. As usual, the Index covers everything that has appeared in The Journal, including the titles and abstracts from current medical literature. As the latter have been chosen for their timeliness and importance, a perusal of the Index will show at a glance medical progress during the last six months, but the practical side of the Index is its greatest value to most physicians. A glance at some of the subjects which are allotted considerable space will show this. There are 100 subtopics under anesthesia and anesthetics. Cancer and its treatment are considered in 174 references, grouped under 150 subtopics. There are 195 subtopics under children and 158 under infants, the latter including the diarrhea of infants, infant-feeding, hemorrhage of new-born infants, pyelitis, scorbutus and tuberculosis in infants, etc. Of the 30 subtopics under diabetes mellitus, 10 refer to articles on the dietetic or therapeutic management. There are nearly 90 subtopics under fracture and its treatment. Under obstetrics and the allied subjects of labor, eclampsia, pregnancy, placenta and cesarean section, there are 275 subtopics. Under syphilis there are over 130 subtopics, under tuberculosis over 320, under typhoid, about 80. As indicated in connection with cancer, the number of articles is much greater than the number of subtopics.

Practically all the foreign journals listed will be lent by The Journal to subscribers and members within the United States on receipt of an addressed envelope and postage to cover the expense of mailing. It is understood that journals will be sent back in seven days. Domestic journals, of course, can be obtained direct from the publishers. Thus the journals indexed are accessible to the general practitioner.

The Index consists of two parts — an author and a subject index. Under "Authors" appear the names of all who have contributed articles to The Journal or to any other medical journal listed in the current literature, as well as the names of those whose papers are abstracted in the medical society reports in The Journal. Under "Subjects" will be found complete references to all reading-matter in The Journal and references to the original articles in all domestic and foreign journals listed, arranged under the subject of the article with double entry when necessary and with numerous cross-references to facilitate the use of the Index. The figures in bold-faced type refer to reading-matter in The Journal.

For the convenience of those who wish a practical working guide in handy form, the Index is published separately under the title "Guide to Current Medical Literature." Physicians who have files of The Journal, either bound or unbound, will find this a convenience.

FALLACIES IN RELATION TO MICROORGANISMS AND FEVERS

We have already called attention to the assertion of Drs. Hort and Penfold of the Lister Institute in London that the febrile temperatures so commonly recorded after subcutaneous injections of various sorts are due to pyrogenic contaminations of the solvents used.[1] It was remarked that this fact — if it be a fact — must be taken into account in all further considerations in the field of experimental investigation or practical therapeutics where this method of injection finds an application. In the current conception of certain types of fever production the essential feature is the introduction or absorption of disintegration products of alien protein or foreign protoplasm such as that of microorganisms. If the studies and practices in this field have regularly been confused by the unsuspected injection of various substances which are contaminations of the common diluents employed, such as water or saline solution, fallacies have crept in and should be generally understood. The sterility of the liquids used affords no guarantee of the absence of the alleged substance, since it is described as a heat-stable pyrogenic substance.

More recently the same investigators[2] have directed attention to still other factors which, they believe, have introduced fallacies into much experimental inquiry on the fever produced by microorganisms. One of these relates to the volume of the diluent used. Thus if a fraction of a culture, non-lethal when given alone, was injected in a volume of water equivalent to from about a hundredth to a twenty-fifth of the body weight, death often ensued in an hour or two. Water alone, used in comparable quantities, did not cause death. Again Hort and Penfold report decided differences in the results of injections of extracts of certain bacteria depending on the use of physiologic saline (0.85 per cent sodium chlorid) solution in place of water. Finally, they refer to the masking of effects by undue dosage.

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[1] Fevers Following Subcutaneous Injections, editorial, The Journal A. M. A., Dec. 14, 1912, p. 2156.

[2] Hort, E. C., and Penfold, W. J.: Microorganisms and Their Relation to Fever, Jour. Hyg., 1912, xii, 361.

There is so much experimental work in progress relating to the pyrogenic effect of extracts of dead cultures of microorganisms, and the factors involved appear so pertinent in relation to the experimental and practical use of vaccines, that it appears timely to call attention again to what is here involved. As Hort and Penfold contend, if it is an advantage in the treatment of an established infection to occasion fever by the injection of impure vaccines, standardization of the pyrogenic content of a vaccine will in the future be no less necessary than that of its bacterial content.

The English writers insist that no injection experiments dealing with so-called protein fever, endotoxin fever, anaphylactic fever or bacterial fever can stand unless based on clear recognition of the numerous sources of fallacy which they have named. We have no experimental information respecting the validity of their assertions or the real existence of the alleged adventitious pyrogenic substances. Perhaps some of our readers are prepared to furnish authentic evidence on the subject under review. The far-reaching points involved are too important, however, to be dismissed without adequate critical review.

COMMERCIAL HASTE VERSUS SCIENTIFIC CONSERVATISM

Business demands promptness; science can afford to wait until its conclusions are tested and proved unquestionable. An example of business haste is furnished by an announcement made April last at the International Congress on Tuberculosis. Countess von Linden and her co-workers, Professor Meissen and Dr. Strauss,[1] read papers at the Congress describing a new remedy for tuberculosis, the result of work carried out under the advice and direction of the late Professor Finkler. The authors styled the new method a "chemical therapy of tuberculosis," suggesting a relation to the *therapia sterilisans magna* of Ehrlich; it employs a combination of iodin with methylene-blue, and a combination of copper with lecithin. It was also announced that the remedy would be put on the market "as soon as possible" by a certain German dye-firm.

Professor Selter, a former assistant of Professor Finkler, has now published an article[2] which throws some light on the hasty manner in which the reports of these so-called researches were prepared. Selter asserts that he was entrusted by Professor Finkler with the carrying out of these experiments, which were afterward taken over by the Countess von Linden. Selter then carried on some work under his own initiative and, contrary to the results of von Linden, found that no marked difference was observed between the treated and the control animals. His clinical trials also showed no decisive benefit from these remedies. Selter says that he protested to Countess von Linden and her colleagues against such premature publicity as they contemplated, feeling that the work had not yet reached a stage that made publication advisable. They refused to wait, however, and in their papers made no reference to Selter or his work. It seems as if ordinary prudence would have led these investigators, when requested not to publish their premature conclusions, to give at least some indication that other experimental trials had not been so favorable as those which they presented. The motive which prevented their doing so cannot be stated with certainty, but the connection with a powerful commercial firm is, without doubt, a strong temptation to optimism in such research. The close connection of this investigation with the firm previously referred to is shown by a recent article of von Linden,[3] in which she states that the analyses of the organs of her experimental animals were performed in the firm's laboratory. Apparently the firm is interested in the production of a new proprietary, and business interests demand that it be put on the market "as soon as possible."

In contrast with this business-like haste, the patient work and conservative conclusions of Selter appear to be characteristic of the true scientist, who regards time as nothing in comparison with the establishment of truth — not to speak of the humanitarian, who will hesitate to rouse without reason the often disappointed hopes of myriads of unfortunate consumptives, and who rather than do this will sacrifice some of his claims to priority in scientific discovery.

Current Comment

PROFESSOR MINOT IN BERLIN

The system of exchange of professors between some of the European and American universities inaugurated several years ago has already been productive of good results; it not only has brought to our shores some of the continental leaders of thought, but has also spread abroad a more favorable conception of the work of American teachers. It is singularly appropriate that the Harvard exchange professor for the current year at Berlin, the well-known embryologist Dr. Charles Sedgwick Minot, has emphasized the desirability of acquainting our German colleagues with the progress which has been made in this country in recent years in the pursuit of certain fields of science with which he is eminently familiar. In his introductory lecture at Berlin, Professor Minot stated that he regarded himself in a sense as a representative of science in America and accepted the duty of reviewing the contributions made by his fellow countrymen in recent years to the domain of anatomy and embryology. He pointed out that in several fields of research American investigators have taken a leading part, for instance, in the study of the origin of the lymphatic system, the interrelation of the nerves and the brain, the problems of cytomorphosis, and the origin of sex Professor Minot also reviewed the peculiar, complex and varied organization of our American universities — a topic naturally confusing to the foreigner, he sketched the rise of the research institutions, commented on the place of collegiate education in our national life, and appropriately acknowledged the debt which America owes to Germany for encouragement and inspiration in the pursuit of science With Professor Theobald Smith and Professor Minot representing us in Berlin in successive years as ministers to the court of German science, American medicine can feel a just pride in its status there

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[1] Von Linden: Die Ergebnisse des Finklerschen Heilverfahrens bei der Impftuberkulose des Meerschweines, Beitr. z. Klin. d. Tuberk., xxiii, No. 2. Meissen: Meine Erfahrungen bei Lungentuberkulose mit Jod-Methylenblau und Kupferpräparaten, ibid. Strauss: Meine Erfahrungen mit Jod-Methylenblau und Kupferpräparaten bei äusserer Tuberkulose speziell bei Lupus, ibid.

[2] Selter: Beitr. z. Klin. d. Tuberk., 1912, xxiv, No. 2.

[3] Von Linden: München. med. Wchnschr., Nov. 19, 1912, p. 2560.

INHALATION OF DUST, AND TUBERCULOSIS OF THE LUNGS

On exposing normal guinea-pigs to the inhalation of various kinds of dust Cesa Bianchi[1] found that more or less inflammation of the bronchial mucous membrane and enlargement of the peribronchial lymph-nodes would result, but that otherwise the conditions in the exposed were quite like those in normal animals When guinea-pigs exposed to dust were infected with tubercle bacilli, however, they almost without exception perished from tuberculosis, the process running a much more rapid course, and the pulmonary involvement being much more pronounced in the exposed animals than in the control animals The results did not seem to be modified by different kinds of dust There developed in some of the animals an extensive cavity formation in various parts of the lungs, especially those in which the tubercle bacilli were introduced through the air passages It appears then that inhalation of dust in the guinea-pig reduces the resistance of the lung tissue to tubercle bacilli so that it becomes a more favorable soil for their development It is well known that in normal guinea-pigs it is difficult to produce a tuberculosis which is predominatingly localized in the lungs, in animals exposed to dust, however, this seems to take place readily, especially when the infection is introduced by way of the respiratory passages These results corroborate the results of clinical experience and statistical study to the effect that the inhalation of dust of various kinds is harmful and favors directly the development of pulmonary tuberculosis

THE MODE OF INFECTION IN EPIDEMIC POLIOMYELITIS

The theory of the nasal route as one path of the virus of epidemic poliomyelitis to and from the body appears at present to be fairly well justified It seems probable that the nasal mucosa is one at least of the sources of infection to other organisms as well as a means of the entrance of the virus into the infected organism The experimental disease can be produced by intranasal swabbing with active virus, and the latter has now repeatedly been demonstrated in the tonsils, the nasal mucous membrane and the nasal washings from fatal and acute cases The possibility of producing the infection by the nasal application affords an opportunity to determine the precise manner in which microorganisms may enter the body through such mucous membranes Do they first reach the blood-stream and through this the central nervous system, or does the virus ascend directly along the lymphatics that unite the nasal mucosa with the central meninges? Flexner and Clark have recently furnished an answer to this question at the Rockefeller Institute for Medical Research[1] It is known that the virus is present throughout the central nervous system in experimental poliomyelitis produced by any method of injection The investigators therefore attempted to ascertain whether or not after an intranasal introduction the virus can be demonstrated equally early in all regions of the cord The answer was definite The infective agent passes from the nasal mucous membrane to the olfactory lobes and adjacent parts of the brain before it reaches the medulla or cord This distribution, as the experimenters remark, is what we would expect were the ascent by the direct lymphatic path and not by the blood-stream Were the dissemination by the latter route, one would anticipate early localization in those parts of the cord and medulla that possess an especial affinity for the virus

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[1] Bianchi Cesa Ztschr f Hyg u Infektionskr., 1912 lxxiii 166

[1] Flexner S., and Clark P F A Note on the Mode of Infection in Epidemic Poliomyelitis Proc Soc. Exper Biol and Med, 1912 x 1

Medical News

ALABAMA

New Officers—Mobile County Medical Society at Mobile, December 7 president, Dr R. H von Ezdorf, secretary, Dr W W Scales——Butler County Medical Society at Greenville, December 6 president, Dr W E Morris, Georgiana, secretary treasurer, Dr L V Stabler, Greenville——St Clare County Medical Society at Odenville, December 5 president, Dr W B Johnson, Asheville, secretary treasurer, Dr J P Hawkins, Ragland——Dallas County Medical Society at Selma president, Dr E B Ward, secretary, Dr B B Rogan, both of Selma——Houston County Medical Society at Dothan president, Dr M S Davie secretary, Dr W C Howell, both of Dothan——Perry County Medical Society at Marion president, Dr R C Hanna, secretary, Dr J B Hatchette, both of Marion——Calhoun County Medical Society at Anniston, December 3 president, Dr T J Brothers, secretary, Dr I P Levi, both of Anniston——Tuscaloosa County Medical Society at Tuscaloosa, December 4 president, Dr G H Searcy, secretary treasurer, Dr Joseph A Maxwell, both of Tuscaloosa

ILLINOIS

Sanatorium for Kane County—The Kane County Board of Supervisors, meeting in Aurora, December 11, appropriated $5 000 to purchase a site for a county tuberculosis sanatorium

Fever Closes Schools.—Public schools and churches of Chandlerville have been closed, and all public meetings have been suspended by the Board of Health because of an epidemic of scarlet fever

Dr Ferguson Not Dead—The announcement in THE JOURNAL December 14, of the death of Dr Harry Milton Ferguson of Morris, was incorrect Dr Ferguson, an esteemed member of the American Medical Association, secretary of the Grundy County Medical Society and coroner of his county, is still alive and in good health

New Officers—Vermilion County Medical Society at Danville December 9 president, Dr Frank M Mason, Rossville, secretary treasurer, Dr Solomon Jones, Danville——Adams County Medical Society at Quincy, December 9 president, Dr Ray Mercer, Loraine, secretary, Dr Elizabeth B Ball, Quincy ——Madison County Medical Society at Alton, December 6 president Dr J Mather Pfeiffenberger, Alton, secretary, Dr E W Fiegenbaum, Edwardsville The next meeting will be held at Granite City, a joint session with the Madison County Press Club

INDIANA

State Hospital Needs —Dr C E Laughlin, superintendent of the Southern Indiana Insane Hospital, Evansville, has informed the legislative committee that he will ask for appropriations of nearly $135,000 for the institution at the coming session of the legislature Of this amount $91,000 is required for two cottages where violent and untidy patients may be kept

Tuberculosis in Indiana.—November statistics of the State Board of Health show that out of 2,864 deaths during that month 233 were due to pulmonary tuberculosis ——Negotiations are being carried on by the Fort Wayne Antituberculosis Association for the purchase of a tract of land of three or four acres on which to establish a tent colony for consumptives Dr E. A Crull is in charge of the enterprise

MARYLAND

Personal —Dr George W Todd, Salisbury, has been appointed superintendent of the State Institution for the Care of Incurable Tuberculosis ——Dr J C Holdsworth, Eckhart Mines health officer of Allegany County, who has been ill with small pox, has recovered

Sanatorium Site Purchased by State —The Pine Bluff Sanatorium near Salisbury, on the Wicomico river, has been purchased as a state institution for the care of incurable tuberculosis at a cost of $15,000 The property is twenty eight acres in extent, covered with a dense growth of pine trees

Baltimore

Personal —Capt J Harry Ulrich has been commissioned chief surgeon of the Fourth Infantry, N G Md, vice Capt William Guy Townsend who has accepted a position in the U S Marine Corps ——Dr John C Stansbury has been appointed assistant surgeon, M C, N G Md ——Dr B Merrill Hopkinson gave a song recital at Lakewood N J, December 14 before the County Club ——Drs Howard A Kelly and John M T Finney addressed the congregation of Madison Avenue Methodist Episcopal Church December 15, in advocacy of the uplift of social conditions in the city Dr Kelly called the church people sharply to task for their indifference in dealing with the social evil and the saloon question

MASSACHUSETTS

Richardson's Estate —The inventory of the estate of the late Dr Maurice H Richardson shows that his personal property was valued at $218 831 and his real estate at $23,770, making a total of $242 601

To Provide Dental Nurses for School Children —The Allied Dental Societies of Greater Boston have taken action in support of a bill to be introduced in the next legislature providing for the licensing and registration of dental nurses who shall be able to help the dentists in their efforts to prevent the decay of teeth, especially among school children

MISSOURI

Personal.—Dr J A Adcock, Warrensburg, has been appointed secretary of the State Board of Health ——Drs J A Wall and J V S Esposito have resigned as members of the resident staff of the St Louis City Hospital

Ambulances to be Used for Poor —The St Louis City Hospital Board has voted to give a three months trial to the scheme of sending ambulances for sick people reported to the hospitals by organized charities At present the ambulances are used only to answer dispensary calls from the police

New Officers —St Joseph Buchanan Andrew County Medical Society at St Joseph, December 4 president, Dr A L Gray, secretary Dr W F Goetze, both of St Joseph ——Rolla District Medical Society at Rolla president, Dr R H Finley, Cuba secretary treasurer, Dr W H Breuer, St James ——Worth County Medical Society, organized at Grant City, November 28 president, Dr W E McKinlay, secretary, Dr J K Phipps, both of Grant City ——Pike County Medical Society at Louisiana, December 3 president, Dr C L Bankhead Paynesville, secretary, Dr F V Keeling, Elsberry ——St Louis County Medical Society at Clayton, December 11 president, Dr J H Armstrong Kirkwood, secretary treasurer, Dr Horine Miles, Webster Groves ——Cape Girardeau County Medical Society at Cape Girardeau, December 9 president, Dr F H G Wilson, secretary, Dr D H Hope, both of Cape Girardeau ——Grundy County Medical Society at Trenton, December 3 president, Dr J F Fair, secretary, Dr T E Moore, both of Trenton

St. Louis

Opposes Fee-Splitting —The St Louis Medical Society at its last meeting voted to cooperate with the American Medical Association in its endeavor to stamp out the practice of fee splitting and recommended that members found guilty be expelled from the society

New Hospitals —Plans have been completed for the Jewish Home for Chronic Invalids to be constructed on a fifty acre tract of land on the east side of Fee Fee Road, near Creve Cœur Lake Four principal buildings will be erected at a cost of $200,000 One of these will be known as the Shoenberg Memorial Building and will be used for the treatment of chronic cases of tuberculosis. A second building will be used solely for incurable patients suffering from diseases other than tuberculosis The third building will be for cases of incipient tuberculosis and the fourth, for other diseases supposed to be curable ——Orthodox Jews of St. Louis have subscribed $10,000 toward the erection of a Kosher Hospital, to cost $15,000 and probably to be erected adjacent to the Jewish Orthodox Old Home

NEW YORK

Physician Gives Site for Campus.—Dr John P Munn, New York City, president of the United States Life Insurance Company has offered the University of Rochester a lot 370 by 170 feet at the corner of Prince Street and University Avenue as a site for the Women's Campus

New Officers —Chautauqua County Medical Society at Amsterdam, December 11 president, Dr N G Richmond, Fredonia, secretary treasurer, Dr J W Morris, Amsterdam ——Watervliet Medical Society, December 5 president, Dr L B Rulison secretary treasurer, Dr Robert J O'Brien.

Hospital Notes.—A contract has been awarded for the construction of the Montgomery County Tuberculosis Hospital, Amsterdam, to cost about $16,000 ——The subscriptions of the first day of the donation for the Rochester General Hospital amounted to more than $10,000 ——An attempt is being made to raise $100,000 for the Infants' Summer Hospital, Charlotte ——Dr William McCleary, a trustee of the Amsterdam Hospital has presented the institution with a deed to property adjacent to the present hospital site

Corner-Stone Laid —The corner stone of the Syracuse University Medical College Dispensary building was laid with formal ceremonies, December 14 After the laying of the corner stone by Chancellor James R Day, the adjournment was made to the College of Medicine where addresses were made by Dr William S Thayer of Johns Hopkins Medical School, Baltimore, Mr Augustus S Downing, first assistant commissioner of education and Hon Allen C Fobes, representing the Syracuse Free Dispensary Association

State Society Prizes —The committee having in charge the Merritt H Cash and Lucien Howe Prizes of $100 each offers as suggestions the following subjects for essays

Diagnosis and treatment of syphilis of the central nervous system
The present status of serum therapy
Latest research relative to cancer
The order and sequence of vascular and cardiac disease
The function of the state in limiting the increase of imbeciles and degenerates
Surgery in functional and organic disorders of the stomach

The essays must be in the hands of the chairman of the committee, Dr Albert Vander Veer, 28 Eagle Street, Albany, not later than April 1, 1913

New York City

Aschoff to Deliver Cartwright Lectures —Prof Ludwig Aschoff of the University of Freiburg, Germany, has accepted an invitation to deliver the Cartwright lectures of the Alumni Association of the College of Physicians and Surgeons in March

New Home for Incurables —A number of business women and social workers have founded a Home for Incurables in a twelve room cottage at Bay Ridge, near the Shore Road, which was formally opened December 12 Dr Ambrose A Scouler will be in charge

Free Immunization Against Typhoid.—The Department of Health in its circular of December 18, announces the establishment of immunization against typhoid as an established prophylactic measure of proved efficiency, and offers free inoculation on application on and after January 1

Fire in Randall's Island Hospital —A fire broke out in Ward 28 of the New York City Children's Hospital on Randall's Island on the night of December 13 One hundred and twenty crippled children were removed from the building without mishap and the fire was extinguished by a bucket brigade formed largely of nurses

Babies' Welfare Association Permanent.—The Babies' Welfare Association, which is composed of numerous organizations interested in the reduction of infant mortality and which began its work on June 10 last, has become a permanent organization Mrs J Borden Harriman has been elected president and Dr Ernest J Lederle, Health Commissioner, has been made honorary president Representatives of other organizations were elected as vice presidents, among these being Joseph H Choate, Robert Fulton Cutting, Cardinal Farley, Dr Abraham Jacobi, Dr Ira S Wile, Robert W deForest and others There are seventy two organizations affiliated with the association Dr S Josephine Baker in her report, said that there had been 600 fewer deaths of babies in 1912 than in 1911 and that they had cared for 50,000 babies and only 125 had died Dr G R Pisek called attention to the fact that the city hospitals had no way of caring for convalescent babies and steps will be taken at once to provide for this need

NORTH CAROLINA

Work on Hospital Begun.—Work on the Patton Memorial Hospital, Hendersonville, has been commenced and it is expected that the building will be ready for patients by June 1

Personal.—Dr Henry J Alexander of Mecklenburg County has been elected president of the State Farmer's Union for the fourth term ——Dr W J Pitz, after four years in practice in Bristol, Colo , has located in Lenoir

Report of State Hospital.—The biennial report of Dr John McCampbell, superintendent of the State Hospital for the Insane, Morganton, shows that the recoveries, based on admissions, were 20 per cent in 1911 and 30 per cent in 1912, the average yearly death rate for the two years being 3 53 per cent The average cost per capita for the biennium was $162 03 Of the fund appropriated by the last legislature for the maintenance of the institution, $16,942 21 was turned back into the state treasury The report urges the need of an additional building to accommodate 200 patients and states that there are now ninety applicants on the waiting list

OHIO

Campaign for Good Samaritan Hospital.—An eight day campaign to raise $200,000 for the Good Samaritan Hospital, Cincinnati, opened December 3 under the auspices of an executive committee

Lane in Cincinnati —Mr W Arbuthnot Lane, London, gave a demonstration and lecture before the Cincinnati Academy of Medicine, November 25, at the City Hospital Mr Lane sailed for home November 26

Staff Appointments —At the annual meeting of the Volunteer Medical and Surgical Consulting Staff of the Ohio Soldiers and Sailors' Orphans Home, Xenia, Dr R H Grube, Xenia, was appointed dean of the staff and Dr P R Madden Xenia, secretary Drs E. S Breese, Dayton, C M Shepherd and C J Shepherd, Columbus, were elected members of the staff

Ill and Injured.—Dr O M Hendershot, East Liverpool, who has been ill for two weeks, is reported to be improving —— Dr C N Chrisman, Dayton, who was operated on in Chicago recently, has recovered and returned home ——Dr E von den Steinen, athletic director of Western Reserve University Cleveland, was operated on for appendicitis November 30 and is reported to be doing well ——Dr J M Hensley, Bellaire, is reported to be seriously ill ——Dr J M Hoskins, Marion, was accidentally shot in the shoulder while hunting, November 19 ——Dr M J Davis, Mansfield, who was operated on recently for appendicitis, has recovered and resumed practice

New Officers —Belmont County Medical Society at Bellaire, December 10 president, Dr J C Meek, secretary, Dr A C Beetham both of Bellaire ——Hancock County Medical Society at Findlay president, Dr T S Wilson, secretary, Dr Cornelia B Kennedy ——Montgomery County Medical Society at Dayton December 6 president, Dr W C Marshall, secretary, Dr C C McLean, both of Dayton ——Tuscarawas County Medical Association Dr E. D Moore, New Philadelphia, president ——Summit County Medical Society at Akron, December 3 president, Dr G M. Logan, secretary, Dr A S McCormick, both of Akron ——Athens County Medical Society at Athens, December 3 president, Dr J M. Hyde, Nelsonville, secretary treasurer, Dr T A Copeland, Athens —— Williams County Medical Society at Bryan president, Dr J A Weitz, Montpelier, secretary treasurer, Dr D S Burns, Bryan ——Eighth Councillor District Medical Society at Marietta president, Dr H R Gever, secretary treasurer, Dr J R McDowell, both of Zanesville

PENNSYLVANIA

Aim of Red Cross Stamps —Circulars in sixteen different languages explaining the purpose of the campaign were distributed from the Red Cross Seal Booth in the post office by the Pennsylvania Society for the Prevention of Tuberculosis

Gift to University —Mrs Montgomery has presented the zoologic department of the University of Pennsylvania with the valuable collection of microscopic slides and preparations left by her husband The collection comprises upward of 3,800 mounted pieces and slides in addition to a large number of objects embedded in paraffin

Hospital Contract Halted.—The county commissioners presented, December 9, a petition asking for a rule to show cause why the construction of the new hospital for the insane at Schuylkill Haven, now under contract, should not be completed by the county officials The rule was granted and an early hearing decided on The new building was to have been completed by July of last year

State Charities Make Large Demands —The State Board of Charities convened, December 11, and meetings will be held until January 1 Appropriations requested by the various state charitable institutions amounted to $4,000,000 more than was asked by the same institutions last year Last year $19,000,000 was asked and $16,000,000 was granted, and it is thought that the legislature will grant no larger sum this year Committees appointed by the board have been investigating the institutions who have asked state aid, and the report of these will have great weight in determining which institutions shall gain or suffer in the board's recommendation to the legislature

Contagious Diseases —Chester High School and Lincoln School buildings, Chester, were again closed for fumigation, December 10, because of diphtheria, while the Starr and Garside Schools were closed December 9, because of scarlet fever ——The community of Norwood, Delaware County, has such an epidemic of measles that public schools and all places of amusement have been ordered closed for twelve days The entire district seems affected There are thirty five cases in Prospect Park, adjoining Norwood ——On December 11, the Board of Control closed the Schuylkill Avenue School building, Reading, because seven cases of typhoid have developed among the pupils ——The typhoid epidemic at Troy, Bradford County, is under control, the emergency hospital is to be closed and patients under quarantine released In all there were 225 cases of the fever and 16 deaths ——The Elizabethville epidemic is also abating, the present record showing 21 persons quarantined, 5 deaths and 5 recoveries

Philadelphia

Dinner to Jefferson Hospital Staff —Mr Daniel Baugh, a member of the board of trustees, gave a dinner, December 12, to the staff of the Jefferson Hospital Dr Hobart A Hare was the toastmaster and impromptu speeches were made by Drs J Chalmers DaCosta, Thomas McCrae, W M Late Coplin and others

Forced to Hold Daily Clinics.—The new Gray's Ferry Dispensary for the treatment of tuberculosis, recently opened in the southwestern section of the city has had such great demands made on it that beginning, December 9, the dispensary will be open daily from 10 12, instead of three times a week The staff of examining physicians has been increased from one to four and additional visiting nurse has been added

Formal Opening of Phipps Institute Postponed.—At the meeting of the board of trustees of the University of Pennsylvania, it was announced the Phipps Institute's new building at Seventh and Lombard Streets, will not be formally opened until next June, although the building will be partly occupied in January and will be entirely open in February, because Henry Phipps, who gave the building to the university will not be able to be present on February 22, the time first planned for the opening

GENERAL

Surgeon General Reappointed—It is announced from Washington that the president has decided to reappoint Brigadier General George H Torney as surgeon general of the Army General Torney does not reach the age for retirement until 1914

New Officers—Seaboard Medical Association at Newbern, December 3 5 president, Dr J F Rawls, Suffolk, Va , secretary, Dr C P Jones, Newport News, Va ——Nu sigma Nu Fraternity at Baltimore, November 29 and 30 president, Dr H W Stiles, Syracuse, N Y , secretary treasurer, Dr E E Irons Chicago

Hookworm Conference—The annual session of the Southern Conference for the Eradication of Hookworm, at Little Rock, Ark closed December 18 19, with the election of Dr Olin West, Nashville, Tenn , as president, Drs A G Fort, Atlanta, Ga and La Bruce Ward, Charleston, S C , as vice presidents, and Dr S D Porter, New Orleans, as secretary treasurer

Personal—Dr Randolph W McDowell, U S Navy, sustained a concussion of the brain and fracture of the collar bone and two ribs in a collision between an automobile and a street car in Philadelphia, November 28 ——Surgeons S S Rodman and I S K Reeves and Drs D C Cather and W E Eaton, U S Navy, were given medals by the government of Santo Domingo for their services in attending the wounded at the battle of Azua

Meeting of Southern Surgeons and Gynecologists—At the annual meeting of the Southern Surgical and Gynecological Association held in Newport News, Va , December 17 19, Atlanta, Ga., was selected as the next place of meeting and the following officers were elected president, Dr John Young Brown St Louis, vice presidents Drs Ap Morgan Vance, Louisville, and Lomax Gwathmey, Norfolk, Va , secretary, Dr W D Haggard, Nashville, Tenn , and treasurer, Dr Le Grand Guerry, Columbia, S C

For Travelers' Health.—At the meeting of the Northwestern Sanitation Conference in St Paul, December 5, a representation of all the northwestern railroads, resolutions were adopted calling for the introduction of bills in the coming session of the legislature of the various states, providing for the abolition of the common drinking cup and roller towel, the fumigation of sleeping cars every two months, the sweeping of cars with formaldehyd and airing and cleansing of all berth clothing after each trip, and the reporting of all illness on any train by the conductor to a physician at the next stop made

LONDON LETTER

(From Our Regular Correspondent)

London, Dec 7, 1912

Medical Education

Medical education is a subject of perennial discussion and many schemes of reform are brought forward which never mature A single portal by a state examination, such as exists in many Continental countries, has long been advocated but seems no nearer fulfilment It offers the obvious advantage of a uniform standard which can be adjusted to any level of knowledge thought desirable At present, about fifteen universities grant degrees in medicine and in addition there are several colleges which grant licenses to practice Thus there are more than twenty avenues to qualification The General Medical Council appoints inspectors to visit the various examinations and see that a proper standard is maintained, but this is a much less efficient method than a uniform single examination It is well known that the examinations of different bodies vary considerably in standard Moreover, the fact that some competition exists between the different licensing bodies has a tendency to lower the standard The General Medical Council also supervises medical education and here, by its regulations, ensures a certain uniformity Thus a five year course of study and attendance on lectures in the various branches of medicine and the ancillary sciences, as well as the passing of various examinations, is rendered obligatory This five year course is an extension of the course which existed some years ago and amounted to only four years Now the growth of science, especially of physiology and biochemistry, has been so great in recent years that five years is not regarded as sufficient, but the increased expense stands in the way of the adoption of a six year course A way out of the difficulty, advocated by some reformers, is to exclude the preliminary sciences, such as chemistry and physics, from the med curriculum and insist on a certificate of knowledge of t before entering on it Thus the whole of the five years can be devoted to medical study This is the method adopted in France

The Increasing Sale of Nostrums

In spite of the campaign against secret remedies their sale appears to be increasing According to statistics issued by the Board of Customs and Excise the revenue from medicine stamp duty for the year ending March 31, 1912, was $1,600,000, an increase of $10,000 on the preceding year On this basis the amount spent on secret remedies in Great Britain can be approximately calculated All shilling (24 cent) packages must bear a 3 cent stamp The revenue would therefore account for over 52,000,000 shilling packages, which would be sold for $12,500,000 This estimate is subject to the correction that some of the nostrums are of higher value and bear a higher revenue duty, but this correction would not make a substantial difference The number of licenses issued during the year to venders of nostrums was 43,131, a slight increase on the preceding year

PARIS LETTER

(From Our Regular Correspondent)

Paris, Dec 6, 1912

The Choice of Experts

The right of the general practitioner to give medicolegal evidence is seriously menaced by the vote which was recently taken at the Congrès de médecine légale approving the restriction of the privilege of making reports on industrial accidents to medicolegal experts alone. On the other hand, a recent court decision declared a report null because it had not been made by the physician who, although appointed by a magistrate and fully competent otherwise, was not in the list of experts named by the court of appeal Owing to this condition of things the Syndicat médical de Paris discussed the question at its last general meeting, at which the following conclusions were reached In view of the necessity in practicing medicine for the physician to have a working knowledge of legal medicine (1) thorough medicolegal instruction should be given again in all the Facultés de médecine with examinations, (2) the diploma of *médecin légiste*, since it is useless and prejudicial to holders of a professional diploma, ought not to be given On the other hand, as moral and scientific guarantees are required of criminal experts and as the selection of these can be made only by their peers, who alone are competent to select them, the *syndicat* voted that the courts of appeal should consult professional and scientific men before drawing up the list of authorized criminal experts Since civil expert reports, especially those of industrial accidents, require no information which it is not within the powers of general practitioners to furnish, the magistrate should not be forced legally to select medicolegal experts from the list drawn up by the court of appeal.

The Physicians' Home

Some years ago a number of physicians endeavored to establish a house of refuge for aged and destitute physicians By donations they were enabled to purchase the little property of Brézolles, a few miles from Dreux (Eure et Loire) Thus three years ago the Maison du médecin was established to receive unfortunate physicians who through ill luck, sickness or improvidence found themselves in distress at the end of their career Besides the kitchen, dining room and sitting room, the house at Brézolles has six sleeping rooms The most unfortunate are kept free of charge, but those who are able pay rent The house is opened to all French physicians, civil, military, naval or from the colonies and their wives or widows A special commission decides which applicants shall be admitted, giving preference to those who are oldest and who have suffered the greatest misfortune For two years the Maison du médecin has taken care of ten pensioners, but as there are forty on the waiting list, and as they cannot be taken care of owing to lack of room, the association is trying to enlarge the place or to buy another For this purpose they are conducting a charity sale on the premises of the Faculté de médecine and have already raised the sum of 35,000 francs ($7, [illegible]

[illegible] lezenne to [illegible] my of Medicine

[illegible] le médecine by [illegible] Delezenne [illegible] ysic [illegible] when admitted to the hospital and the other from tonsillitis Calomel had been administered to both of these babies for a number of weeks *before* the two little patients were admitted to Dr Abt's service In both cases the calomel was immediately stopped as soon as the babies were admitted to the hospital and improvement at once followed In the case of pyelitis, Dr Abt says, "An infant 6 months of age who had received a cathartic drug in some form every day since birth was recently brought to the writer For the first few weeks of life calomel was given every other day Later on calomel was being administered in doses varying from 3/10 to 2 grains daily for two weeks All cathartics were withdrawn" In the other case Dr Abt says, "The writer recently saw a little patient of 4 years who was taken ill about ten days previously with a tonsillar affection The physician in charge began treatment with 1 grain of calomel per day, and continued the administration of this remedy until the writer saw the patient on the tenth day It was only necessary to stop the calomel and treat the mucous membrane with astringent remedies to effect a cure in a few days"

The point of my remarks was that both of the babies in question had been given large doses of cathartics before they were admitted to the hospital, and that the withdrawal of the calomel and the administration of proper food were at once followed by improvement The stenographer who reported my discussion evidently misunderstood me No "experiments" were carried on with "normal babies" The report of my remarks as given in last week's Journal is entirely incorrect and misleading

Julius H Hess, Chicago

Queries and Minor Notes

Anonymous Communications will not be noticed Every letter must contain the writer's name and address but these will be omitted on request

TREATMENT OF COMEDONES

To the Editor —A trifle which is yet of much importance for the general practitioner is the presence of blackheads on the face especially in the alae nasi regions. What is a good treatment for their eradication without any subsequent cosmetic defect? How satisfy the patients?

J S L.

Answer.—The skin should be rubbed with a tincture of green soap and washed vigorously with warm water, care being taken not to produce too great an amount of irritation The blackheads, or comedones, can be removed by pressure by clean thumb nails or by the use of a comedo extractor At the same time such internal treatment should be given as will promote a healthy condition of the skin Special attention should be given to the condition of the digestive tract and to the prevention of constipation The subject is thoroughly discussed in works on skin diseases under the head of acne

USE OF TUBERCULIN—THE WASSERMANN REACTION IN NON SYPHILITICS

To the Editor —1 What is your opinion in regard to the reliability of tuberculin as a test for tuberculosis? Would you recommend its use?

2 Is it possible to get a positive Wassermann reaction in a non syphilitic patient? If so what are the conditions of the patient?

J M Blum M D Edgemont S Dak.

Answer.—1 See The Journal, Nov 30, 1912, p 1992

2 The Wassermann reaction is sometimes positive in patients with other diseases principally scarlet fever, frambesia and cancer These conditions, however, can usually be eliminated by the history and circumstances of the patient Aside from such cases, a positive Wassermann reaction is an evidence of uncured syphilis

BINET-SIMON TEST FOR CHILDREN'S MENTAL CAPACITY

Dr J J Levy, Syracuse, N Y See The Journal, Jan 13 1912, page 132.

INTERNATIONAL MEDICAL CONGRESS

Dr F Bierhoff, New York The secretary of the United States Executive Committee for the International Medical Congress is Dr A R Allen, 2013 Spruce St, Philadelphia This congress will meet in London, Eng, Aug 6 12, 1913 See London Letter and general news in The Journal, Dec 21, 1912

AMERICAN MEDICAL ASSOCIATION INSIGNIA

Dr Laura M Johnson, Somerville, Mass Reference to information on the meaning of the American Medical Association button will be found by referring to The Journal of Sept 14, 1912, page 896

REMOVAL OF TATTOO MARKS

Dr W S Nickerson, Davenport, N D See The Journal, Sept 14, 1912, page 895

MUSIC AS A THERAPEUTIC AGENT

F M D A list of articles on this subject was given Oct 19, 1912, page 1474

HEART

Dr E J Pengelly, Hibbing, Minn *Heart* is published by Shaw & Sons, Fetter Lane, Fleet Street, E C, London, England. The subscription price is 20 shillings ($4 80) a volume

FORMULAS FOR LIQUID SOAP

Dr C R. Morss, Coleraine, Minn See The Journal, April 22, 1911, page 1214, and June 8, 1912, page 1774

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal Medical Sciences, Philadelphia

December CXLIV, No 6 pp 781-884

1 Partial Gastrectomy in a Case of Multiple Carcinoma of Stomach J H Gibbon Philadelphia
2 *Effects of Medicinal Doses of Aconite on the Pulse Rate R. D Rudolf and G E C Cole Toronto
3 *Lupus Erythematosus and Raynaud's Disease M B Hartzell Philadelphia
4 Gross Anatomy of the Spinal Cord and Nerve Roots Their Bearing on Symptomatology and Surgical Treatment of Spinal Disease C A. Elsberg New York
5 *Bence-Jones Proteinuria Report of Four Cases T R Boggs and C G Guthrie Baltimore
6 *Further Experiences with Complement Fixation Test in Diagnosis of Gonococcus Infections of Genito Urinary Tract in Male and Female H J Schwartz and A. McNeil, New York.
7 Indicanuria W G Morgan Washington D C.
8 Adenocarcinoma of Thyroid, with Metastasis to the Cervical Glands and Hypophysis D J McCarthy, Philadelphia, and H T Karsner, Boston
9 *Softening of Spinal Cord in a Syphilitic After the Injection of Salvarsan L. Newmark San Francisco
10 Banti's Disease and Allied Conditions R Stein New York
11 Cases of Juvenile Psychasthenia Illustrating Successful Treatment. T A Williams Washington D C
12 *Purpura in the Course of Chronic Pulmonary Tuberculosis J M Cruice Philadelphia.

2 **Effects of Aconite on the Pulse-Rate** —During the past year the authors have tested the drug in many cases as regards the effects on the pulse rate, always using medicinal doses, and this paper gives the results of their work They used the ordinary B P tincture The pulse rate was usually taken for hours before and for hours after the administration, and in many cases the blood pressure was also measured, but no effect on the circulation was detected Often considerable fluctuations were seen, but it was found that these were mere coincidences and were just as apt to occur without the aconite After finding no effects from the administration of these tinctures they secured a quantity of B P tincture "which had been tested by physiologically and by assay in the laboratory, and which was guaranteed to be of B P strength" Most of the experiments were done with this tincture, and were still negative Crystalline aconitin, found by experiments on animals to be of full activity in solution corresponding in strength to the B P tincture, still gave negative results It appears from these findings that the tincture of aconite on the market is usually inert

3 **Lupus Erythematosus and Raynaud's Disease.**—Hartzell believes that the relationship which exists between these two maladies may be best explained by supposing both at times to be due to a common cause, most probably some toxin circulating in the blood, which acts primarily on the vessel walls producing vasomotor and inflammatory changes in the skin and subcutaneous tissues Cases of the kind here considered seem to go far in support of the view that erythematous lupus should be regarded as a toxic erythema

5 **Bence Jones Proteinuria** —The authors have observed four cases in fifteen months It would seem that this type of pro-

teinuria is probably more common than the literature would lead one to suppose Of these cases, two were clinically multiple myeloma, and a third was probably of the same type, although they have no objective proof The fourth case was one of metastatic carcinoma from the breast It is especially interesting to note that the detection of the last three cases followed definitely the interest aroused among local physicians by the presence of the first case, which led them to test the urine of their patients more carefully The recognition of the Bence Jones body in the urine in each instance antedated any suspicion of the true nature of the malady, with the exception of the last case, which was clearly associated with carcinomatous metastases That this type of proteinuria may be present for some time before any clinical evidence of myelomatosis appears is shown by the first three cases noted

6 **Gonococcus Complement-Fixation Test.**—The authors summarize their findings as follows A positive reaction denotes the presence or recent activity in the body of a focus of living gonococci A negative reaction does not exclude gonococcus infection but, for the reasons stated, should be accorded considerable importance A strong positive reaction is not to be expected earlier than about the fourth week, and then only in very acute cases with some complication A positive reaction is not obtained if the disease is limited to the anterior urethra A positive reaction does not entirely disappear until seven or eight weeks after cure In other words, if a strong positive reaction is obtained seven or eight weeks after apparent clinical cure, the patient should be looked on as still harboring gonococci In chronic cases, isolation of the gonococcus in culture is the only absolute, bacteriologic proof of gonococcus infection The technic of a complement fixation test is simpler than that of isolation of the gonococcus in culture and the possibilities of error are less In cases regarded clinically as postgonorrheal, a positive reaction is obtained in 31 4 per cent In sixty two cases of chronic prostatitis giving a history of gonococcus infection within three years, a positive reaction was obtained in 54 8 per cent In 165 patients looked on as clinically cured for at least three months, a positive reaction was obtained in 13 2 per cent In women, a positive reaction is probably not obtained unless there is at least some involvement of the cervix. On account of the unreliability of the bacteriologic diagnosis of gonococcus infection in women, the complement fixation test should prove of special usefulness in gynecologic conditions

9 **Softening of Spinal Cord After Salvarsan.**—A man who had been infected with syphilis three years before presented the first symptoms of a fatal softening of the cord fifty six hours after an injection of salvarsan

12 **Purpura in Tuberculosis**—Eight cases of purpura seen by Cruice occurred in the terminal stage of chronic pulmonary tuberculosis The first case was an undoubted case of purpura hemorrhagica, and occurred only five days before death A second case, although there was hematuria and at one time bloody stools accompanying a diarrhea, was simple purpura, the hematuria being accounted for by tuberculosis of the kidney, ureter and bladder Four cases were instances of simple or cachectic purpura One case, in which the thrombosis of the internal saphenous vein was the exciting cause, was what Osler calls a mechanical purpura, being caused by a venous stasis The last case might be called either a simple purpura complicating the tuberculosis or a toxic purpura complicating the intense jaundice Whether, however, a simple or a toxic purpura it was a purpura occurring at the termination of chronic pulmonary tuberculosis complicated by a most unusual form of caseous tuberculosis of the liver

Journal of Experimental Medicine, Lancaster, Pa.

December XVI No 6 pp 719 875

13 *Chemistry of Blood Serum. A A Epstein New York
14 *Differences in the Effects of Stimulation of the Two Vagus Nerves on Rate and Condition of the Dog s Heart A E Cohn New York
15 *Relation of the Spleen to Blood Destruction and Regeneration and to Hemolytic Jaundice III The Changes in the Blood Following Splenectomy and Their Relation to the Production of Hemolytic Jaundice R M Pearce J H Austin and J H Musser, Jr Philadelphia
16 *Idem IV A Study by the Methods of Immunology of the Increased Resistance of the Red Blood Corpuscles After Splenectomy H T Karsner and R M Pearce Philadelphia
17 *Idem V Changes in the Endothelial Cells of the Lymph Nodes and Liver in Splenectomized Animals Receiving Hemolytic Serum R M Pearce and J H Austin, Philadelphia
18 Nitrogen Retention in the Blood in Experimental Acute Nephritis of the Cat O Folin H T Karsner and W Denis Boston
19 *Pathology of Primary Splenomegaly (Gaucher Type) with Report of Autopsy on a Male Child Four and One-Half Years of Age F S Mandlebaum, New York
20 Selected Action of Gentian Violet on Closely Related Bacterial Strains J W Churchman and W H Michael Baltimore
21 Lymph Formation and Edema of the Liver with Experimental Nephritis Produced by Cantharidin E L Opie St Louis
22 *Experiments on Insect Transmission of the Virus of Poliomyelitis C W Howard and P F Clark New York
23 Studies on Ferment Action V Immunization with Proteolytic Cleavage Products of Pneumococci J W Jobling and S Strouse Chicago

13 **Chemistry of Blood Serum**—The most striking feature observed by Epstein in this study is the extensive variation of the blood serum in relation to its proteins It was found that in certain diseases the globulin fraction is markedly increased, whereas the total protein of the serum may be normal, or may fall far below normal in amount The diseases in which an increase in the globulins takes place are grouped as follows (1) cardiac diseases associated with decompensation and serous effusions, (2) pulmonary or respiratory affections of inflammatory or non inflammatory origin (pneumonia, emphysema, polycythemia), (3) diabetes mellitus, and (4) parenchymatous nephritis In the serum of chronic parenchymatous nephritis the increase in the globulin content was most pronounced and constituted nearly all the protein, or as much as 95 per cent The globulin content of serum was normal or diminished in the following diseases (1) simple achylia gastrica (short duration), (2) tuberculosis, (3) diabetes insipidus, and (4) chronic interstitial nephritis Other ingredients of the sera analyzed showed variations which could not be definitely classified, but in a general way it appears on careful analysis that an accumulation of water and salt occurs in diseases in which the globulin fraction of the blood serum is increased

14 **Effects of Stimulation of Two Vagus Nerves**—It is concluded by Cohn from results obtained by experiments that stimulation of the right vagus nerve in the dog usually causes arrest of all the chambers of the heart, stimulation of the left vagus nerve exerts a moderate negative chronotropic effect on the auricles, stimulation of the left vagus nerve has a profound effect on the conduction of impulses over the auriculoventricular system The degree of effect exercised on the auriculoventricular system by stimulation of the left vagus nerve varies In some dogs conduction is depressed to an extent which causes only a delay in the conduction of impulses from auricles to ventricles (P R time), in other dogs the conduction is depressed to a degree which results in incomplete heart block, while in still other dogs conduction is so depressed that although the auricles continue to contract, no impulses pass from them to the ventricles When stimulation of either the right or left vagus nerve causes asystole of nomotopic ventricular contractions, ectopic ventricular contractions may occur The time which elapses before ectopic ventricular contractions occur depends on the irritability of the ventricular muscle and this may vary in different dogs Stimulation of the left vagus nerve may rarely cause sino auricular block Possibly stimulation of the right nerve may also produce this effect There is consequently usually a great qualitative difference in the action of the two vagus nerves on the heart of the dog

15 **Changes in Blood After Splenectomy**—The results of a study of the changes in the blood after splenectomy and of the effect of the administration of hemolytic serum lead the authors to the following tentative conclusions (1) The failure of a hemolytic serum to cause jaundice is due in some way to the [illegible] uch frequently follows splenectomy Animals, [illegible] or not [illegible] ave a low blood count [illegible] ly develop jaundice [illegible] the other ha [illegible] serum r [illegible] ll m

jaundice (2) The difficulty of producing hemoglobinemia and jaundice in animals splenectomized one month or more, is due, as shown by blood count, to the use of hypotonic salt solution test, and by the search for the presence of hemoglobin in the serum and urine to an increase in the resistance of the red cells The results of detailed serologic tests on this point will be presented later (3) It is possible that spontaneous jaundice occurring at long periods after splenectomy is an accompaniment of the complete regeneration of the blood The study of the blood in animals splenectomized for long periods, seven to ten months, indicates that spontaneous jaundice occurs only when the animal has recovered from the initial period of anemia and has a high cell count and high hemoglobin content (4) As to the mechanism responsible for the anemia following splenectomy and for the increased resistance of the red cells, they offer no explanation

16 **Increased Resistance of Red Cells After Splenectomy**—The authors found that the erythrocytes of splenectomized dogs show increased resistance to the action of hypotonic salt solutions and to specific hemolytic immune serum The degree of resistance appears to increase with the length of time that has elapsed after splenectomy This increased resistance of the erythrocytes is not due to an increased antihemolytic power of the animal's serum or to a diminished complementary value of the serum, but is a property depending on the erythrocytes themselves Non splenectomized animals receiving a single injection of specific hemolytic immune serum and developing a temporary anemia show likewise on recovery an increased resistance of the corpuscles without the presence of antihemolysin in demonstrable amount As anemia of varying grade is a characteristic result of splenectomy, it would appear that the increased resistance of the corpuscles is a concomitant of the regeneration of the red cells following such anemia and is thus analogous to the increased resistance of such cells not infrequently observed in various forms of experimental anemia There is no evidence to indicate that the anemia after splenectomy is due to the presence of hemolytic bodies, or that the increased resistance of the cells is due to antihemolytic bodies, accumulating in the serum as the result of the ablation of the spleen It is evident, therefore, that the spleen in some way controls or regulates blood destruction (and regeneration?), and in the hope of throwing light on the subject, an investigation of the bone marrow and lymph nodes of splenectomized dogs is now under way

17 **Increase in Number of Endothelial Cells of Lymph Nodes After Splenectomy**—In a large proportion of dogs that had been splenectomized for periods of two weeks or more, the authors found a great increase in the number of endothelial cells of the lymph nodes In most splenectomized dogs that succumbed to an injection of hemolytic immune serum within forty eight hours, the sinuses of the lymph nodes contained large numbers of endothelial cells, phagocytic for red cells This was not seen in normal dogs receiving hemolytic serum Likewise a similar power of phagocytosis was seen frequently in the stellate cells of the capillaries of the liver Both in the lymph nodes and the liver these cells appeared to be formed *in situ* The authors found no evidence that they have been transported to these organs They suggest the possibility of the lymph nodes assuming some of the function of the spleen

19 **Pathology of Primary Splenomegaly**—Mandlebaum maintains that primary splenomegaly of the Gaucher type is a distinct disease related in all probability to the blood diseases It begins usually at an early age frequently affects several members of a family and runs a chronic course The clinical manifestations are pronounced hypertrophy of the spleen subsequent enlargement of the liver, absence of palpable lymph nodes, absence of jaundice and ascites, absence of characteristic blood changes, discoloration or pigmentation of the skin and a tendency to epistaxis or other hemorrhages The lesions are found in the spleen, lymph nodes, bone marrow and liver These organs show the presence of iron coating pigment, and large multinuclear cells with a characteristic cytoplasm In the early cases peculiar large phagocytic cells arising from atypical large lymphocytes are found in the follicles (keim centra) of the hemapoietic system After leaving the follicles these cells possess phagocytic qualities for a certain period As a result of the phagocytosis the cells enlarge, the nature of the cytoplasm changes, and the cells acquire a characteristic vacuolated and wrinkled appearance The cells are carried from the spleen through the portal system of the liver, where they are destroyed The irritation produced by this destructive process gives rise to an increase in the intralobular connective tissue The disease is eminently a chronic one, without any of the manifestations of malignancy, and always terminating as the result of some intercurrent affection The etiology is unknown, although a family predisposition to some toxic agent which causes an irritability of the follicles in the hemapoietic system probably exists The possibility of some protozoan infection as an etiologic factor must not be overlooked.

22 **Insect Transmission of Virus of Poliomyelitis**—It is claimed by Howard and Clark that the domestic fly (*Musca domestica*) can carry the virus of poliomyelitis in an active state for several days on the surface of the body and for several hours within the gastro intestinal tract Mosquitoes (*Culex pipiens, C sollicitans* and *C cantator*), in their experiments, have not taken up and maintained in a living state the virus from the spinal cord of monkeys Lice (*Pediculus capitis* and *P vestimenti*) have not taken the virus out of the blood of monkeys or maintained it in a living state The bedbug (*Cimex lectularius*) has taken the virus with the blood from infected monkeys and maintained it in a living state within the body for a period of seven days

Journal of Oklahoma State Medical Association, Muskogee

November V No 6, pp 237 290

24 Diseases of Heart Muscle L J Moorman Oklahoma City
25 Fracture of Skull Fifteen Recent Cases R Grosshart, Tulsa
26 Sarcoma of Kidney in Infants Report of Case T H McCarley Atoka
27 Pylorospasm W M Taylor Oklahoma City
28 Preventive Gynecology A. B Leeds Chickasha
29 Treatment of Constipation F L. Hughson Vinita

Journal of Ophthalmology and Oto Laryngology, Chicago

November VI No 11 pp 361 393

30 Lingual Tonsils in Health and Disease J H Johnson Coffeyville Kan
31 Severe Burn of Eye from Contents of Fluid Core Golf Ball W O Nance Chicago

Washington (D C) Medical Annals

November XI No 5, pp 217 277

32 Syphilitic Tracheal Stenosis E H Reede Washington D C
33 Obstructions of Alimentary Canal W I Carr G T Vaughan H H Kerr E P Magruder and T A Groover Washington D C
34 Pellagra a Food Poisoning Attributed to Use of Indian Corn P S Roy Washington D C
35 Acid Nitrate of Mercury in Dermatologic Surgery H H Hazen Washington D C
36 Carcinoma of Stomach D S Lamb Washington D C
37 Relations of Vascular System to Certain Ocular Diseases W H Wilmer Washington D C

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Journal of Children's Diseases, London

November IX No 107 pp 481 528

1 Infant Feeding F G Crookshank
2 *Cutaneous Reaction to Tuberculin in Childhood C P Lapage.
3 Case of Rheumatoid Arthritis in Child Six Years of Age. W R Jordan

2 **Cutaneous Reaction to Tuberculin in Childhood**—To determine the value of the cutaneous reaction in the diagnosis of tuberculosis in children Lapage collected and analyzed the results of the tests in 1 000 children These have been chiefly children showing indefinite signs which may point to tuberculosis All the cases tested have been carefully examined clinically by the ordinary methods of physical examination The number of children reacting to the test increased steadily with advancing age, although probably the increase of infection is not so rapid after the tenth year In the less suspicious cases comprising the last 483 cases, a smaller percentage of children reacted at each age period The reaction occurs with a steadily

increasing frequency as the clinical examination progresses from negative to definite The older the child is, the higher is the percentage of clinically doubtful cases giving a reaction There is greater difficulty in diagnosing tuberculous infection after the age of 2 years by clinical examination This is explained by the fact that in older cases tuberculous infection is very common and is not the cause of the illness under consideration On the other hand, in infants up to the age of 2 years, an infection has such marked results and is so often fatal that the clinical diagnosis is more easily made Thus we see that as indicating a tuberculous illness the test is likely to be of greater value in young than in older children

Glasgow Medical Journal

November LXXVIII No 5 pp 321 399

4 Three Hundred Consecutive Cases of Appendicitis G T Beatson
5 Sanatorium Treatment of Pulmonary Tuberculosis J W Allan
6 Case in Which Certain Symptoms of Syringomyelia Followed Enteric Fever J Brownlee

Practitioner, London

November LXXXIX, No 5 pp 680 744

7 *Cirrhosis of Liver D Duckworth
8 Indications for Mastoid Operation S Hastings
9 Nose Throat and Ear in Relation to General Medicine G W Badgerow
10 Common Varieties of Tonsils and Their Recognition F C Pybus
11 Pulmonary Fibrosis in Children C Miller
12 Recent Cases of Severe Anemia C H Melland.
13 Suturing of Tendons J R Kerr
14 Recent Literature on Diseases of Lungs A J Jex Blake.
15 Recent Work on Heart Block C E Lea
16 *Inunction Treatment of Measles D I Connolly
17 Significance of Abdominal Pain in Enteric Fever A K Gordon
18 Hypertonic Saline Treatment of Cholera with Special Reference to Pathology Prevention and Treatment of Choleraic Uremia G B Sarkar
19 Etiology of Lead Poisoning as Illustrated by Two Recent Outbreaks T M Tibbetts
20 Biliary Pulmonary Fistula A C Roper
21 Ruptured Sarcoma of Right Kidney Simulating Appendicular Abscess G C F Robinson

7 **Cirrhosis of Liver**—The early symptoms of cirrhosis, Duckworth says, demand treatment for the gastric catarrh and intestinal sub inflammatory conditions Tartrate of sodium in effervescence is useful for this, with a few minims of dilute hydrocyanic acid in each dose, given every six hours Milk and arrowroot, or yolk of egg and milk, is an appropriate diet Whey, or curds and whey, and Koumis are useful A mustard cataplasm to the epigastrium is helpful, if there is a tendency to esophagismus or vomiting Bromid of ammonium relieves the irritability of the pharynx When the digestive powers return, the best treatment for the liver consists in full doses of ammonium chlorid and liquid extract of taraxacum, sweetened with liquid extract of liquorice, this should be maintained for some weeks If the digestive powers are weak, sodium bicarbonate with gentian, rhubarb, tincture of capsicum and some nux vomica will prove of advantage All strong liquors are forbidden, and all precautions taken to ensure this The patient should be duly informed as to the nature of his ailment, and made to understand the risks of continuance in his vicious acquired habits Inunction with biniodid of mercury ointment may be carried out from time to time over the hepatic region

16 **Inunction Treatment of Measles**—As soon as the child is received into the special ward assigned to measles, a hot bath is given Then follows a thorough application of eucalyptus oil to the whole of the body, with the exception of the hands and the part of the face round about the nose, mouth and eyes The mouth is irrigated twice daily with weak alum lotion, and glycerin and borax is applied to the interior of the mouth and to the gums The throat (tonsils and fauces) is treated with carbolic oil (1 10) morning and evening Every day for the following four days the child s blanket bathed morning and evening, and again rubbed all over with eucalyptus oil, the throat and mouth having the same treatment as on admission In most of the cases, it was found by Connolly that the gums were very red and more or less swollen, and often quite definite ulceration was present on the inner side of the cheeks and lips, much larger and whiter than Koplik's spots Further it was believed that by attacking the mouth and throat he was striking at one of the chief strongholds of the virus Connolly is of the opinion that the moist spray and particles, coughed out by the patient, are highly infectious to a susceptible person In those cases in which bronchopneumonia is already established, the statement holds true to a greater degree

As regards the thorough rubbing in of the eucalyptus oil, some local effect would, doubtless, be produced, but the main idea was to get the vapor inhaled into the air passages If the virus were dwelling in the skin or the subcutaneous tissues, it seems reasonable to suppose, too, that direct conflict would take place between the eucalyptus absorbed and such virus as might be present The face area was omitted, because of the irritation caused to the eyes by the vapor, and it was not thought necessary to apply the oil to the hands The total number of patients so treated was 160, of these complications were present in 110, equal to a percentage of 68 75 per cent In fifty cases complications were absent throughout, a percentage of 31 25 per cent Forty of the children, 25 per cent, had more than one complication Complications were already present on admission in ninety nine cases 61 9 per cent, while in eleven cases (6 9 per cent) complications developed in the course of the disease Bronchopneumonia was present on admission in nineteen cases, or 11 9 per cent., and in two other instances it developed later Inflammation of the eyes, including acute and chronic conjunctivitis and trachoma, was in evidence twenty nine times (18 1 per cent) Another frequent complication was stomatitis, present in twenty one cases (13 1 per cent) Gastro enteritis, most often severe, occurred in twelve children (7.5 per cent), while a simple gastric catarrh was noticed in two cases Another fairly frequent and troublesome complaint (always when found, present on admission) was vulvitis in little girls, being observed in twelve cases (7 5 per cent) A similar percentage of the children had bronchitis (7 5 per cent) Otitis media complicated the measles in six cases (3 75 per cent), in four of these it was present on admission In eleven cases (6 19 per cent), acute laryngitis was a serious complication Inflamed tonsils were observed seven times (4 4 per cent), and skin diseases, such as ringworm, eczema and intertrigo, were present in six cases (3 75 per cent) Whooping cough developed in two children (1 25 per cent) early in the disease, and meningitis was present in the same number on admission In one doubtful case of measles meningitis developed some days after admission The remaining complications were tetany (one), tubercular disease (two), both on admission and one child had an axillary abscess due to a septic focus in the right upper arm

The total number of deaths was eight, giving a case mortality of 5 per cent Comparing this result with the case mortality prevailing before the introduction of the inunction method and its accessories, Connolly found that there were 100 cases of measles at the Manchester Union Hospital during the period extending from April 1910, to the early part of May, 1911 The total number of deaths in this period was eleven, a case mortality, of course, of 11 per cent The first death in Connolly s series coincided with the one hundred and thirty third case Seven were due to gastro enteritis, which disease was present on admission One child had only slight gastro enteritis, and had a doubtful history of measles just previous to admission, meningitis supervened later Among the seven just mentioned, one was dying from tuberculous cachexia

Presse Médicale, Paris

November 19 XX No 95 pp 961 972

22 *Fracture of Lower End of Femur (L ostéosynthèse appliquée aux fractures fermées diacondyliennes de l extrémité inférieure du femur) L Alglave

November 20 No 96 pp 973 980

23 *Modern Views in Regard to Chronic Nephritis (Les grands … for … nels du mal de Bright) F Widal

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far apart and there are thus three loose pieces with possibly additional sequesters He describes three cases in which clinically normal conditions were restored in a remarkably short time by the technic described with twenty illustrations It is not applicable for a compound fracture, but only when there is absolute asepsis of the tissues to be operated on After the accident the leg is cleansed, disinfected and temporarily immobilized in a wire splint until any excoriation of the skin has healed In about a week he paints the region with iodin and operates with tricot gloves drawn over rubber gloves to protect them He obtains access to the fracture from the front by a U incision and saws through the patella or through the anterior tuberosity of the tibia The flap of bone and soft tissue thus formed is turned back the knee is flexed still more, and after cleansing the joint and region of clots, etc, the condyles are reduced and held in place with screws and the epiphysis is then reduced, the leg extended straight, and a metal plate is screwed to hold the parts in good position or a wire is wound around them Two patients were women of about 42 the other a man of 32 The conditions were determined by radiography two or three days after the trauma The eighth day after the operation the leg was left free in bed, the patient was allowed to get up the thirty fifth day, and by the forty fifth day in one case and the seventy fifth in the other, was using the leg normally without any support The radiographs show the unusually complex nature of the fractures, and Alglave declares that no other technic could possibly have given such functional results in such a short time

23 **Chronic Nephritis**—Widal emphasizes that the progress of science has made the examination of a patient with nephritis now mainly a problem in physiology The important point is to determine the functional capacity of the kidneys It is no longer enough to say that the patient has acute or chronic nephritis of interstitial or parenchymatous origin, the diagnosis now must be completed with the specification as to whether the disease has a single or a multiple syndrome, that is whether there is retention of chlorids or of nitrogen and whether there is abnormally high blood pressure isolated or associated Modern science enables the symptoms from each of the above to be sorted out and the treatment applied accordingly

Berliner klinische Wochenschrift

November 25 XLVIII No 48 pp 2253 2296

24 Further Experiences with Combined Thyroid, Epinephrin and Sodium Cacodylate Treatment for Thyroid Insufficiency (Weitere Erfahrungen mit der Schilddrüsentherapie) H Stern (New York)
25 Acetonuria as Sign of Pregnancy Normal or Extra Uterine (Ueber Acetonurie bei Extrauteringravidität und bei gynäkologischen Erkrankungen) J Novak and O Porges
26 *Tuberculin Treatment to Arrest Fever in Pulmonary Tuberculosis (Entfieberungen bei Lungentuberkulose mittels Tuberkulin insbes mit kleinsten Dosen) J W Samson
27 Nature of Tuberculin Reaction R P v Calcar
28 Radiotherapy of Pernicious Anemia (Aktinium X Behandlung insbes der perniciösen Anämie) P Lazarus
29 *Etiology of Vasomotor Trophic Disturbances A. Zweig
30 Successful Removal of Chondroma Adjacent to Pituitary Fossa (Chondrom des Clivus Blumenbachii) H Coenen
31 *Primary Sarcomas in Muscle F Landois
32 The Crystals in Cystic Kidneys (Die Kristalle der Cystenniere) S Weil
33 *By Effects of Hormonal (Ueber Hormonalwirkung) A Schönstadt

26 **Tuberculin Treatment of Fever in Pulmonary Tuberculosis**—Samson reports convincing evidence as to the efficiency of minute doses of tuberculin in arresting the fever and thus improving the general condition and affording other measures a chance to work He gives the tuberculin for this purpose in extremely small doses, the aim being not to induce tolerance and lead up to large doses but merely to influence the organism in such a way that it can get the upper hand of the fever By thus limiting the disease to its focus, the patient recovers if a cure is possible, the nearer to the hectic type, the less promising the outlook He thinks the special tuberculin to be used is of comparatively less importance The temperature curve in eight clinical cases is shown demonstrating the effect on the fever which had proved rebellious to all other measures In the first case he commenced with 0 0001 mg "old" tuberculin and the temperature began to go down when 0 0015 mg was reached His closing dose was 10 mg with a four months' course The patient was a boy of 14 with a large cavity in the left lung and temperature of 38 1 C (over 100 F) after three months of general sanatorium treatment He is now in good condition, two years later

29 **Etiology of Vasomotor-Trophic Disturbances**—In the case described by Zweig the syndrome was made up of three different sets of symptoms, from abnormal conditions in the circulation, in the thyroid and in the psyche In this, as in Roth's similar case, there was evidently a constitutional overexcitability of the sympathetic nerve system, and of its vasomotor elements in particular, the thyroid syndrome was evidently secondary to this In exophthalmic goiter, on the other hand, the thyroid element is the primary factor, the rest of the syndrome being consecutive to the abnormal thyroid functioning The psychic disturbances in Zweig's case persisted unmodified after the other symptoms had subsided confirming its independence of the thyroid and cardiovascular functioning The somatic symptoms and the abnormal psychic reactions were probably all traceable to a third element, probably the product of some disturbance in the internal secretions acting on a constitutionally predisposed brain and nervous system The main symptoms were acute hallucinations, recurring urticaria—suggesting an angioneurotic purpura—sudden enlargement of the thyroid tremor, exophthalmos, rapid pulse, etc, but no albuminuria and no symptoms on the part of the heart at any time The patient was an unmarried woman of 52

31 **Sarcoma in Muscle**—Landois states that in the last eleven years at the Breslau surgical clinic twenty cases of sarcoma in the soft parts have been encountered, and in nine of these the sarcoma was in the muscles, on the arm in two men of 38 and 44, on the leg in four men between 19 and 36, on the trunk in two women, 15 and 38, and on the head in a girl of 15 The tumor was successfully removed in only five of the cases (leg and trunk), but three in this group already have a recurrence, so that only two of the patients were cured by the operation, the interval since being one and two years The unfavorable prognosis in these muscle sarcomas should compel early and exceptionally radical removal of the growth

33 **By Effects of Hormonal**—Schönstadt reports three cases of appendicitic peritonitis in which he gave hormonal, and he deplores the fact that this medicinal article was placed in the hands of the general practitioner without a warning that it contains an element liable to induce a serious drop in the blood pressure He was appalled at its by effects in one case A man of 68 with good and strong pulse at 120 was given an intravenous injection of 0.2 c c of hormonal according to directions Two minutes afterward there was general tremor, then convulsive twitchings, collapse, and death the twentieth minute In another case a robust man of 32 was given an injection of 0 2 c c. without the slightest effect being apparent. A fresh supply was obtained directly from the manufacturers and a second injection given the next morning, but no effect on the intestine or heart followed There was likewise no sign of a reaction to the hormonal in his third case, the peritonitis progressing to a fatal termination about the third day apparently uninfluenced by the hormonal, although there was no paralysis of the intestines in either of these latter cases

Deutsche medizinische Wochenschrift, Berlin

November 21 XXXVIII, No 47, pp 2201 2248

34 Antisepsis and Asepsis F Pels Leusden
35 *Traumatic Exophthalmic Goiter (Zum Kapitel des traumatischen Morbus Basedow) F Dyrenfurth
36 Formation of Vagina Out of Small Intestine Two Cases (Künstliche Scheidenbildung aus dem Dünndarm) M Henkel
37 Technic for Concentrated Mercurial Treatment of Syphilis. (Zur Technik der Anwendung hochkonzentrierter Quecksilbermischungen in der Syphilisbehandlung) K Zieler
38 *Toxicity of Urine and Measles (Harntoxizität und Masern) H Mautner
39 Acidity of Urine in Various Diseases (Azidität des Harns in einigen Krankheiten) G Quagliariello and F Medina.
40 *Origin of Polycythemia K. Wakasugi
41 Placenta Praevia G Zinke (Cincinnati)
42 Carbon Dioxid Snow in Skin Disease (Vorrichtungen für die Gewinnung fester Kohlensäure zur Behandlung von Erkrankungen der Haut) H L. Heusner
43 *Simple Test for Hemin in the Blood (Vereinfachung der Häminkrystallprobe) Nippe
44 *Cancer in Children (Maligne Tumoren im Kindesalter) W Usener

37 **Traumatic Exophthalmic Goiter**—Dyrenfurth reports three cases of exophthalmic goiter developing after an accident In two cases a predisposition was evident, with stigmata of hysteria, these cases sustain the general assumption that when exophthalmic goiter develops *after a trauma*, the individuals were not previously entirely sound In the third case, however, a man in apparently perfect health was involved in an automobile street car accident, and two or three weeks after the physical pain had subsided, nervous symptoms developed and, six months later, symptoms of exophthalmic goiter It is a question whether the physical or psychic shock was the predominant factor The experiences to date with exophthalmic goiter of traumatic origin do not encourage the hope of recovery from operative measures Operations of various kinds which benefit under other conditions seem to do little good on patients suffering from the effects of an accident He has advised an operation on the thyroid in these cases, but doubts whether this will attack the evil at its root The fact that a trauma may entail exophthalmic goiter seems rather to support the assumption that the disturbed functioning of other glands as well as of the thyroid is of causal importance Every hypothesis of defective functioning of any glands is based on the disturbance in the innervation of the glands, and this again sustains the conception of the causal importance of the psychic trauma in such cases

38 **Toxicity of the Urine in Measles, Etc.**—Mautner reports ten cases in which the toxicity of the urine was tested, the results showing that abnormally high toxic power is not peculiar to measles, but may be encountered in diphtheria, scarlet fever, peritonitis and other affections, as well as in the healthy under certain conditions

40 **Polycythemia**—Wakasugi reports a case of polycythemia in which necropsy showed abnormal proliferation of the red bone marrow as the only probable cause for the polycythemia These findings confirm those reported in the ten other cases with post mortem findings on record

43 **Test for Hemin**—Nippe states that the crystals of hemin develop beautifully when the specimen of blood is mixed with a few drops of a solution of 0 1 gm each of potassium bromid, iodid and chlorid in 100 gm of acetic acid This durable solution shows up the crystals even in putrefied blood and in blood mixed with rust and long exposed to the weather The specimen on the slide is warmed until it bubbles, when the crystals form at once The excess of fluid is then taken up with blotting paper and the crystals mounted in Canada balsam without removing the cover glass

44 **Cancer in Children.**—Usener reports a round celled sarcoma of the clavicle in a boy of 8, a sarcoma of the right kidney in a girl over 4, a sarcoma in the abdominal wall in a girl of 13, and a sarcoma of the jejunum in a boy of 9 These malignant tumors formed 2 3 per cent of 173 tumors of various kinds encountered in two recent years at the Leipsic children's hospital It is remarkable that kidney cancer generally occurs at such an early age Monti found forty four under 5 in his fifty five cases, and Steffen 194 in his 222 cases Only ten of the eighty eight operative cases had a permanently favorable outcome, the other children succumbing to the operation as in the case described The cancer in the abdominal wall seems to be the only case of the kind on record, Steffen has reported two cases in infants, probably congenital, and the tumor was in the subcutaneous adipose tissue on the extremities in these cases The boy of 9 was cured by removal of the round celled sarcoma in the jejunum The prognosis of these cases is bad on account of the early metastasis Of the thirteen known to date, the patients were all boys but one An operation was done in three cases, but the one here reported is the only one with a favorable outcome, and for this appendicitis was responsible This compelled operative treatment, and during the operation the invaginated cancer was discovered The condition would probably have continued a long time without much disturbance if it had not been for the casual discovery during the operation on the appendix In all the other cases the intestinal sarcoma was practically inoperable when first discovered, and metastasis soon followed

Medizinische Klinik, Berlin

November 24 VIII No 47 pp 1893 1930 and Supplement

45 *Typhoid (Abdominaltyphus) H Hochhaus
46 Vasomotor Trophic Neuroses (Rolle des vegetativen Systems in der Pathologie der vasomotorisch trophischen Neurosen) R Cassirer
47 *Clinical Research on 1 400 Healthy Persons (Einiges über Albuminurie Pulsfrequenz Kniereflex vasomotorisches Nachröten Augen Zungen Händezittern Mac Burneyschen und Erbschen Druckpunkt, Mastodynie, Ovarie nach Untersuchungen an Gesunden) O Schellong
48 The Blood in Potassium Chlorate Poisoning (Zur Hämatologie der Kalichloricumvergiftung) F Gaisböck
49 *Treatment of Obesity (Einfache Methode der Bekämpfung der Fettleibigkeit.) A. Galisch
50 The Build of the Thorax and Pulmonary Tuberculosis (Thoraxbau und Tuberkulöse Lungenphthise.) C Hart.

45 **Typhoid.**—Hochhaus reports some unusual and puzzling cases, among them that of a young woman suspected of typhoid but all the signs were negative and the symptoms indicated merely a pyelocystitis, typhoid bacilli were found in pure culture in the urine and the usual symptoms developed after a time In a case recently reported by Jores a middle aged man succumbed to fulminating sepsis, even at necropsy nothing characteristic of typhoid was found, but the blood in the heart was swarming with typhoid bacilli Hochhaus suggests that fulminating sepsis of this kind might occur in an old typhoid bacilli carrier, and that typhoid and paratyphoid infections might occur together from new auto infection The low leukocyte count, retarded pulse and diazo are instructive differential points for typhoid In prophylaxis he calls attention to Perl's recent finding that typhoid bacilli are found on the teeth and tonsils late into convalescence Hochhaus' experience confirms the advantage of strict dieting for three weeks but then feeding soft foods more abundantly than has hitherto been the rule Meat had better be avoided until the temperature is permanently normal The newly acquired knowledge in regard to the distribution of the bacilli explains the lack of effective action from calomel, etc He adds that there does not seem to be much prospect for serotherapy of typhoid, as Pfeiffer has recently reiterated

47 **Clinical Tests on the Healthy**—Schellong tabulates his findings on examination of 1,400 presumably healthy persons applying for positions in the postal and telegraph service during a period of twelve years Albumin was found on boiling the urine in only 4.5 per cent of 1,400 men, confirming the rarity of albuminuria in the healthy The pulse was found 88 or over in 35 7 per cent of 1,000 male and female candidates, 96 and over in 22 per cent , 100 and over in 14.5 and 108 to 120 in 6 7 per cent , the women and most robust men having the fastest pulse The knee jerk was exaggerated in 85 per cent of 500 candidates, tremor of the tongue was evident in 33 per cent of 219, of the closed eyelids in 70 per cent of 240 examined, and tremor of the spread fingers of the extended right arm in 26 per cent of 217 examined McBurney's point was tender in only six of 500 examined The relative frequency of these nervous phenomena in the healthy persons examined shows that they must not be regarded as testifying to neurasthenia, hysteria or a traumatic neurosis in clinical cases, they are all within the range of the physiologic reactions of the nervous system Congestion and tenderness of the ovary and neuralgia of the mammary gland, on the other hand, were conspicuous by their absence in the hundreds of women examined The least nervous excitability was found in the persons whose previous occupation had kept them in the open air The number of seconds that elapse before redness develops in the skin after a line has been drawn on it with the finger, is a useful test of the vasomotor excitability, as also Steinert's definition of the knee jerk, namely, only that in which the pronounced reflex action follows the blow on the patella or tibia, not on the quadriceps tendon

49 **Treatment of Obesity**—Galisch has been very successful in reduci [illegible] the weight of his over corpulent patients by the one si [illegible] the a [illegible] ood taken after mid [illegible] at night to [illegible] breakfast [illegible] ffee or [illegible] t [illegible] and [illegible] od

taken up to noon. All his patients lost one or two pounds a week on this restriction of food after the noon meal, and all thrived on it

Münchener medizinische Wochenschrift

November 19 LIX No 47, pp 2545 2600

51 *Improved Technic for Blocking Nerves (Ueber Leitungs anästhesie unter Zuhilfenahme elektrischer Reizung) C Perthes
52 Technic for Perineal Prostatectomy (Erfolge der nach meiner Methode ausgeführten perinealen Prostatektomien mit seitlichem Schnitt) M Wilms
53 The Oxidation Processes in the Cells II O Warburg
54 *The Neutral Red Reaction in Milk E Moro
55 Glycogen in Optic Nerve in Two Cases of Diabetes (Erkrankung der Nerven des Auges bei Diabetes mellitus) M. Hoffmann
56 *Salt by the Mouth in Prevention of Anaphylactic Shock (Ueber Schutzwirkung wiederholter Kochsalzgaben per os gegenüber dem anaphylaktischen Schock) H Langer
57 Spectroscopic Test for Hemibilirubin in Pathologic Urine H Fischer
58 Surgery in the Navy in Action (Grundzüge der allgemeinen Seekriegschirurgie) M zur Verth
59 Copper Salts in Treatment of Tuberculosis (Weitere Erfahrungen mit einer Chemotherapie der Tuberkulose) G v Linden
60 *Apparatus for Resuscitation of the Apparently Drowned or Asphyxiated (Verfahren für die künstliche Atmung bei Scheintoten und Asphyktischen) L. Lewin
61 Technics for Examination of Cerebrospinal Fluid in Syphilis G L. Dreyfus
62 Retention of Urine from Bladder Tumors (Vesikale Harnstauung bei zottigen Blasengeschwülsten) O Zuckerkandl

51 **Nerve Blocking for Local Anesthesia** —Perthes has found that it is possible to determine whether the cannula is in direct contact with the nerve by sending a minimal electric current through the cannula insulated except at the tip A slight twitching follows in the muscle fibers innervated directly by the nerve, and this shows the exact moment when to inject the anesthetic The stimulation is too slight to cause pain, he gives a sedative before local anesthesia to keep the patient in a twilight hazy condition although still able to respond to appeals

54 **Neutral Red Reaction in Milk** —Moro states that a 1 per cent solution of neutral red turns human milk yellow and cow s milk purple One drop of the stain on a teaspoonful of drawn breast milk changes the tint to a reddish purple at once if the human milk has been kept too long and is thus unfit for use

56 **Salt in Prophylaxis of Anaphylactic Shock.**—Langer some time ago announced that the action of morphin was attenuated by ingestion of a strong salt solution He found this same mitigating action evident in guinea pigs treated with alien serum and then given strong salt solution by the mouth five minutes before the injection of serum was repeated Further experiments showed that this same protection against anaphylaxis could be attained by a course of small amounts of salt taken by the mouth These results suggest the application to man of this method of protecting against anaphylaxis by prolonged administration of salt in amounts too small to induce an appreciable reaction A connection between ingestion of salt and anaphylaxis is suggested by Heilner's experiments although in an opposite direction He found that injection of a hypertonic salt solution in serum treated animals, elicited phenomena of anaphylaxis just like those of an anaphylaxis inducing second injection of the serum

60 **Artificial Respiration Table** —Lewin gives an illustrated description of a folding portable table apparatus on which the individual to be resuscitated is fastened and with which it is possible to combine all the improved methods for artificial respiration including application of the principle of Schultze's swinging The apparatus is said to work so simply and easily that one person alone can manage it A similar table on a smaller scale would prove useful in reviving infants born asphyxiated

Hygiea, Stockholm

October LXXIV No 10 pp 1057 1184

63 Direct Visual Inspection of Interior of Abdomen and Chest (Om laparo och thoracoskopi) H C Jacobæus
64 *Artificial Pneumothorax in Pulmonary Tuberculosis C Saugman
65 Calculus in Prostate (Om prostatasten.) G Naumann (Fall af prostatasten) K. Belfrage

64 **Artificial Pneumothorax in Treatment of Pulmonary Tuberculosis**—Saugman remarks that this unfortunate name has probably deterred some from adopting this method of treatment as the mere idea of a pneumothorax conjures up such dangers He has applied it in the last five years in 104 cases but found conditions in thirty one cases (30 per cent.) preventing effectual compression of the lung This percentage of failures is much larger, he adds, than in the American reports, probably because in America the procedure is applied before the disease has reached such advanced stages as in his material In his entire series of 2,100 injections of nitrogen he has had only one fatality, his ninety eighth patient, and important lessons were learned from this case The patient was a young man who dreaded the procedure intensely The puncture pierced only the chest wall and no gas could be injected Repeating the puncture it proved possible to inject 2 c c of the nitrogen until the manometer showed a slight negative pressure during respiration After waiting for eight or ten minutes the cannula was introduced for the third time When the manometer showed slight negative pressure the flow of gas was arrested The young man suddenly collapsed, with signs of heart failure after vomiting copiously he ceased to breathe There was no electric current available, but all other means of stimulation were tried in vain, including massage of the heart Necropsy failed to disclose any cause for the fatality, no lacerated vessel could be found so that air embolism can probably be excluded. The findings were like those in a fatal chloroform accident Everything pointed to reflex paralysis of the heart from pleura shock The case teaches that the injection of gas should not be made soon after eating, and that the reflex excitability should be reduced by a preliminary injection of morphin, and further, that not more than one puncture should be made at one sitting Saugman has often made one, two, three or four punctures at one sitting without any inconvenience, but he is convinced that this young man would not have died thus if only one puncture had been made that day Another lesson taught by the case is to have ether camphor and digitalis at hand and also an electric induction current The possibility of a fatality must always be borne in mind, as with general anesthesia, but the same as with this, fatalities are so rare that the fear of them should not deter from the use of this valuable measure Aside from this fatality the only by effects noted were in a few cases transient dizziness, seeing black, or distress, or brief paresis in one arm, with brief clonic contraction A few patients with a habit of swooning fainted but none lost consciousness and there were no disturbances in the pupil or field of vision In two cases there was a suspicion of air embolism, the nitrogen was being injected under high pressure and a sudden movement of the patient may have ruptured an adhesion and thus torn a vessel in it, but the immediate *subsidence of the symptoms apparently excluded the assumption* of air embolism He tabulates the details under sixteen headings of the entire 104 cases especially the signs indicating the possibility of effectual compression They are far from conclusive to date and further research is urgently needed on means to determine beforehand whether the pleural cavity is open or not Even Litten's diaphragm phenomenon sometimes proved misleading In seventy two of the total 104 patients effectual compression was realized and effects were obtained he says, surpassing those possible with any other method especially in a group of thirty five pure cases, free from complications Of four patients with temperature over 39 C three became entirely afebrile, five of seven with temperature of 38 to 39 C, and five of six with subfebrile temperature, while nine with occasional febrile periods have been entirely free from them since In all of this group of thirty five the tuberculous process was severe, involving the entire lung with much destruction of tissue in some, and the other lung showed some involvement in a few instances, in three of half of the lung and more He prefers puncture to an incision, citing four cases in eighty on record in which fatal infection developed after the incision technic for pneumothorax He thinks this positive danger far outweighs the hypothetical danger of air embolism with the puncture technic.

Medical Education and State Boards of Registration

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ALABAMA Montgomery January 14 Chairman Dr W H Sanders

ARIZONA Phoenix January 6 7 Sec Dr John Wix Thomas

COLORADO State House Denver January 7 Sec., Dr David A Strickler 612 Empire Building

DISTRICT OF COLUMBIA Washington January 14 Sec. Dr George C Ober 125 B Street S E

ILLINOIS Coliseum Annex Chicago January 22 24 Sec Dr James A Egan Springfield

INDIANA Room 57 State House Indianapolis January 14 16 Sec Dr W T Gott State House

MINNESOTA Pathological Institute University of Minnesota Minneapolis January 7 Sec. Dr Thomas S McDavitt Lowry Building St Paul

NEW MEXICO Santa Fé January 13 Sec. Dr W E Kaser East Las Vegas

NEW YORK January 28 31 Chief of Examinations Division Mr Harlan H Horner Department of Education Albany

NORTH DAKOTA Grand Forks January 7 Sec Dr G M Williamson

OKLAHOMA Oklahoma City January 14 Sec., Dr John W Duke Guthrie

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RHODE ISLAND State House Providence January 2 Sec Dr Gardner T Swarts State House

SOUTH DAKOTA Watertown January 8 Sec Dr L G Hill

UTAH Salt Lake City January 6 7 Sec Dr G F Harding 810 Templeton Building

VERMONT Montpelier January 14 16 Sec Dr W Scott Nay Underhill

WASHINGTON Spokane January 7 12 Sec Dr F P Witter Traders Block

WISCONSIN Milwaukee January 14 16 Sec. Dr John M Beffel 3200 Clybourn Street

Pennsylvania June Examination Q

The following are the questions asked by the Bureau of Medical Education and Licensure of Pennsylvania, at the examination held June 24 to 26 inclusive, 1912 It is interesting to note that closely related subjects have been combined for the examinations held in each half day session This differs quite markedly from the usual procedure The arrangement of subjects in the five half day sessions and the questions asked are as follows

FIRST HALF DAY SESSION

PHYSIOLOGY PATHOLOGY AND BACTERIOLOGY

1 Given an acute attack of peritonitis due to perforating appendicitis, state the pathologic conditions that may be present and give the determining cause together with a method of demonstrating this cause

2 In acute lobar pneumonia (croupous pneumonia) detail the local conditions the determining cause of these conditions and state briefly their effect on the normal function of the lungs as well as on metabolism

3 Discuss briefly the lesions in the diffuse form of arteriosclerosis both in the blood vessels and in important associated organs Explain the effect on the function of these organs

4 Describe two lesions of the liver that will cause lessening of the supply of bile and discuss in detail the effect of this loss

5 Detail the lesions in typhoid fever describe the determining cause and explain the sources of elimination

6 Given a patient with an incipient tuberculosis of the lungs explain the local lesions describe at least two laboratory methods by which the diagnosis may be verified and discuss in detail each method

7 Describe a method pursued in the preparation of diphtheria antitoxin and give the reasons for the various steps

8 Describe the lesions name the causes and outline the technic of a method of demonstrating the variety of ophthalmia neonatorum

9 In carcinoma of the female breast, name the varieties describe the gross appearance of each and enumerate the avenues and usual points of metastasis

10 Enumerate four of the usual pathologic lesions capable of causing hematuria describe two of these conditions (one of cystic, the other of renal origin) with a method of demonstrating each in life

SECOND HALF DAY SESSION

SYMPTOMATOLOGY DIAGNOSIS TOXICOLOGY AND MEDICAL JURISPRUDENCE

1 State the local and the constitutional symptoms of follicular tonsillitis and differentiate it from diphtheria

2 Enumerate the diagnostic symptoms of angina pectoris and name other diseases that resemble it, stating their points of difference

3 Enumerate the symptoms and physical signs diagnostic of lobar pneumonia and differentiate it from subacute pleurisy with effusion

4 Describe in detail the symptoms of scarlatina and differentiate this disease from measles

5 Given a patient brought into the hospital unconscious with a history of having fallen in the street name four diseases which might exist and give the differential diagnosis

6 State the diagnostic symptoms of acute miliary tuberculosis name another disease with which it may be mistaken and differentiate the two diseases

7 What is ptomain poisoning? Enumerate the diagnostic symptoms of same and state other conditions that may resemble it

8 State the symptoms of acute anterior poliomyelitis in its different stages and differentiate it from neuritis

9 Give the symptoms of acute (fatal) arsenical poisoning and enumerate a legal question which must be considered by the physician under these circumstances

10 What medicolegal reasons would justify a physician in terminating a pregnancy? What steps should be taken prior to this action?

THIRD HALF DAY SESSION

OBSTETRICS AND GYNECOLOGY HYGIENE AND PREVENTIVE MEDICINE

1 Name the common abnormalities of the breasts after confinement their causes prevention local and hygienic treatment

2 What methods would you adopt in order to relieve the vomiting of pregnancy and on what theory would you use the various methods mentioned?

3 What symptoms would lead you to the apprehension of an oncoming attack of eclampsia before the convulsions set in? What is its treatment both before and after the convulsions?

4 What are the dangers of abortion (miscarriage)? If abortion occurs how are these dangers avoided and if they are not avoided how are they overcome?

5 What is the significance of excessive menstrual bleeding intermenstrual bleeding entire absence of bleeding?

6 Name the more usual bacteria which cause puerperal septicemia together with the methods of their introduction into the birth canal the results of their presence there and the prevention of these results

7 Name four abdominal enlargements which might be mistaken for pregnancy and differentiate them from pregnancy

8 Outline the essential conditions surrounding a safe and healthful supply of drinking water If unsafe how may the water be rendered safe for use?

9 During an epidemic of typhoid fever what precautions are necessary both as to the immediate family and as to the community at large?

10 In inspecting a house as to its plumbing what are the essential points to establish?

FOURTH HALF DAY SESSION

ANATOMY AND SURGERY

1 Enumerate the lesions to be considered resulting from a severe blow on the nose and give the method of treatment of any two forms of injury selected

2 Outline the essentials of a good amputation describe any one major amputation giving the surgical anatomy of the part selected

3 Enumerate five of the more usual conditions capable of causing peritonitis describe an operation that might be required for any one condition selected

4 What conditions would warrant the enucleation of an eye? Describe an operation for the same.

5 In severe injury about the ankle joint enumerate what possible lesions should be considered

6 Describe the technic of intravenous infusion state the veins accessible for infusion and how to locate each

7 What surgical conditions must be considered in retention of urine? Outline an operation for the correction of any one condition selected with the reasons for selecting this

8 State the usual position of the fragments in an oblique fracture of the lower third of the femur and the muscular control of the fragments

9 State possible lines of transmission of infection in palmar abscess and give the external landmarks for the location of the palmar arches

10 What symptoms and conditions referable to the gall bladder or liver would call for operative interference?

FIFTH HALF DAY SESSION

MATERIA MEDICA THERAPEUTICS

1 (a) What is ergot? (b) give its official name (c) enumerate the official preparations, (d) give dose of each (e) what are its most pronounced physical actions?

2 Write a prescription in the metric system with the directions for administration containing a nitrite and state what effect you would aim to produce another prescription containing an ammoniacal heart stimulant and a third containing a hydragogue cathartic in pill form

3 From what class of organic substances are acetanilidum and acetphenetidinum obtained? What is their general physiologic action? What is the action of most of this class of drugs on the blood? Give the dose of the two above named How are they excreted?

4 Give the official name of five salts or other preparations of mercury and state the therapeutic indications of each

5 How would you treat a case of typhoid fever together with the more important complications? Give dose and frequency of administration of each remedy you would use in this disease together with reasons for its employment.

CHEMISTRY

1 What is the chemical reaction of blood? To what is it due? What is hemoglobin? Oxyhemoglobin? Methemaglobin?

2 Describe a quantitative test for urea in urine What is the usual composition of biliary calculi? Describe their physical appearance In what manner do they originate?

3 What is chlorin? How does it chiefly occur in nature? Describe its physical properties In what form is it found as a component part of the human body? Mixed in equal proportions with hydrogen what chemical action takes place?

4 Differentiate between human and cow s milk as to percentage of water proteid matter sugar fat and ash

5 Describe the technic of Fehling's test for sugar in urine In case the test proves positive what is the visible evidence thereof and on what chemical basis does it rest?

Book Notices

ARTHRITIS A Study of the Inflammatory Diseases of Joints By Peter Daniel F R.C S Senior Surgeon Metropolitan Hospital London Edited by James Cantlie M A M.B No 8 the Medico-Chirurgical Series Cloth. Price, $4 Pp 515 New York William Wood & Co 1911

This book abounds in personal experiences, and represents the author's views and opinions based on knowledge and observation He is emphatic in his statement that "except as a result of trauma, arthritis is only a symptom of a disease whose real nidus is in some distant part of the body" Nor would he differentiate synovitis from arthritis, because "only a very short acute inflammation can possibly involve the synovial membrane alone" He also emphasizes the fact that the arthritis may be secondary to a disease in some other part of the body even years after the subsidence of the primary infection Sepsis and arthritis—this is the sequence of events Daniel has found that by far the commonest source of arthritis is sepsis in the oral cavity—a fact to which all experienced clinicians now subscribe As for the toxic arthritis, he suspects a microorganism as being the real cause of the trouble in every case

Considerable space is devoted to a discussion on rheumatoid arthritis, which the author believes to be caused by a multiplicity of bacterial processes, foremost among these being genital infection The treatment advocated in all these lesions is one which combats the primary cause of the trouble—the original infection—and which prevents local deformity and destruction of tissue Specific treatment of the local trouble, which fails to take into account the primary nidus, is condemned, and rightly so The trouble is not, Daniel says, a local one The joint symptoms are merely a local manifestation of a systemic affection or a localized infection in some other part of the body Therefore, they combat infection and prevent destruction of tissue He employs, as a routine, Bier's hyperemia, aspiration of cavities containing pus, injection of iodoform and glycerin emulsion, and extension The latter is emphasized as being the only effective means to prevent deformity

The book is well written and contains a mine of information on an exceedingly important subject

COMMON DISORDERS AND DISEASES OF CHILDHOOD By George Frederic Still M A M D F R C P Professor of Diseases of Children King's College, London Second Edition Cloth Price $5 50 Pp 813 with illustrations Oxford Medical Publications London Henry Frowde 1912

Since this book was reviewed in THE JOURNAL in 1909 changes and additions have been made to bring the work up to conform to the present understanding of the various subjects in pediatrics Among the additions in this edition are sections on enlarged tonsils and adenoids, epilepsy, asthma and hydrocephalus The sections on infantile paralysis and congenital syphilis have been revised to correspond with later information on those subjects The work still retains its former character of a record chiefly of the personal experiences and opinions of the author, who is well qualified to impart most valuable information on the common disorders and diseases of childhood

THE CHEMICAL CONSTITUTION OF THE PROTEINS By R H A Plimmer D Sc Assistant Professor of Physiologic Chemistry University College London Monographs on Biochemistry Second Edition Two Parts. Part I—Analysis Cloth. Price 5 shillings 6 pence New York Longmans Green & Co 1912

THE PHYSIOLOGY OF PROTEIN METABOLISM By E P Cathcart M D D Sc Grieve Lecturer on Chemical Physiology in the University of Glasgow Monographs on Biochemistry Cloth Price $1 25 net Pp 142 New York Longmans Green & Co 1912

The monographs of this series which have so far appeared entirely fulfil the hopes with which the outcome of the enterprise was awaited As we have stated before, this seems to be the best way yet devised for publishing such rapidly developing subjects as biologic chemistry The publication of small and inexpensive monographs, each written by a man specializing in the field he covers, permits accurate presentation and frequent revision We note with pleasure that some of these monographs are already appearing in a second edition While all are of extreme value to specialists in biologic chemistry and the many related subjects, several are also of great interest to the progressive physician, and none more so than Cathcart's "Physiology of Protein Metabolism" We can strongly recommend to any physician who wishes to acquaint himself with the modern developments in our knowledge of protein metabolism, with all that this subject means for nutrition and dietetics, a careful reading of this monograph In it will be found as careful, accurate and interesting an exposition as can be desired Plimmer's review of the chemical composition of the proteins and the methods of analysis used in their study is of more direct interest to the biologic chemist than to the physician, but to the latter it should be of value as a reference work to elucidate the terms of protein chemistry which are now so frequently met in medical literature

PRIMARY MALIGNANT GROWTHS OF THE LUNGS AND BRONCHI A Pathologic and Clinical Study By I Adler A M M D, Professor Emeritus at the New York Polyclinic. Cloth Price $4 net Pp 325 with 17 illustrations New York Longmans Green & Co 1912.

Primary cancer of the lung is usually regarded as one of the very rare forms of cancer, but the number of cases being recorded indicates that after all it perhaps is not so rare In his monograph Adler collects reports of 374 cases of primary carcinoma, ninety cases of sarcoma and about 100 other cases in which the diagnosis was not conclusive The anatomic features and the clinical manifestations are discussed fully and interestingly Surely any physician who reads carefully the hundred odd pages devoted to this discussion will be better prepared to detect early the existence of cancer of the lung So far the treatment of primary cancer of the lung has been practically only symptomatic and for the purpose of relief, any hope of cure being regarded as out of the question It has been asserted that lung cancer is unique because absolutely beyond the reach of the surgeon Even if surgery might become better equal to the task it would be of no use because the diagnosis cannot be made early enough In the meantime the technic of lung surgery has developed rapidly and in actual cases of lung cancer there has been operation, with relief to the patient and possibly lengthening of life Adler emphasizes strongly the principle that with this advance in surgery, which is likely to continue, added responsibility is placed on the physician as the only hope lies in early diagnosis He should realize that the disease is not so infrequent but that he may meet a case any day Adler recommends exploratory thoracotomy in cases suspected to be lung cancer but not susceptible of definite diagnosis This operation may prove of service also in relieving distressing symptoms

SEXUAL IMPOTENCE By Victor G Vecki M D Consulting Genito Urinary Surgeon to the Mount Zion Hospital San Francisco Fourth Edition Cloth Price $2 25 Pp 394 Philadelphia W B Saunders Company 1912

The fourth edition of this standard monograph on impotence is much enlarged and contains many facts that have been brought out since the third edition was published The author considers impotence as a symptom and discusses thoroughly its etiology pathology, symptomatology and treatment There is an exhaustive chapter on prophylaxis, and finally a review is given of all known methods of treating impotence These are thoroughly discussed, and the experience of the author with each of these methods is reported Any physician who will spend the time to read Dr Vecki's book will learn a great deal about this common, complex and obscure symptom, impotence

DIAGNOSE DER SIMULATION NERVÖSER SYMPTOME Ein Lehrbuch für den Praktiker By Dr Siegmund Erben Vienna Paper Price, $2 15 Pp 194 with 24 illustrations New York Rebman Company 1912.

This short compendium on the diagnosis of simulated nervous symptoms is complete in itself and calculated to warn the practitioner of the numerous errors into which he may fall when examining for simulation The work can be recommended especially to those who are frequently called on to testify in the courts in questions involving nervous diseases of a functional character, sustained through railway or other accidents An English translation would be welcome

EXPLANATION OF THE USE OF THE INDEX

This is an index not only to the reading matter in THE JOURNAL, but also to original articles in the principal medical periodicals of this and other countries The reading matter appearing in THE JOURNAL is distinguished by the use of black-faced numerals

The letters used to explain in which department the matter indexed appears are as follows "E," Editorial, "C," Correspondence, "T," Therapeutics, "Ml," Medicolegal, "P," Propaganda for Reform, "ME," Medical Economics, "ab," abstract, the star (*) indicates an "Original Article" in THE JOURNAL.

This is a subject index and one should, therefore, look for the chief word, with the following exceptions "Deaths" and "Society Proceedings" are indexed under these titles at the end of the letters "D" and "S" Matter pertaining to the Association is indexed under "American Medical Association"

All matter is indexed under the most important word of the heading used in THE JOURNAL, and also under the subject heading For instance, abscess of the brain will be found under "abscess," as well as under "brain" Such titles as "ocular manifestations, etc" have been indexed under "Eye" Cross references have been liberally used

The figures in parentheses refer to the paragraph, the number following to the page in THE JOURNAL, for example

> ABDOMEN gun shot wound complicated by 22 intestinal perforations ***1886**

This reference is to an original article in THE JOURNAL as shown both by the star and by the black faced numerals indicating the page

> ACID solution for examination of cerebrospinal fluid preparation of **960**

This reference, as indicated by the black faced figures, is also in THE JOURNAL, and on turning to page 960 we find an answer to a question in the Department of Queries and Minor Notes

> ABDOMEN echinococcosis of (5) **1222**—ab

In this one, the page number, being in black faced type, shows that the matter is discussed in THE JOURNAL, "ab" indicating that it is an abstract Turning to page 1222, we find (5) refers to an article by T S Tirumurti in the *Indian Medical Gazette*, August.

> ABDOMEN adhesions preadhesions and postadhesion in pelvis and (52) 2003

The fact that in this last reference the page is given in ordinary type indicates that only the title of the article is given Turning to page 2003 we find that the numeral (52) refers to a paper on that subject by F E Walker which appeared in the *Journal of the Iowa State Medical Society*, November

In the AUTHOR'S INDEX are the names of the authors of articles which have appeared in THE JOURNAL of the American Medical Association and of articles that have been listed from week to week in the Department of Current Medical Literature as having appeared in other journals The black faced numerals indicate that the article is in THE JOURNAL, either in full or in abstract The star (*) preceding the page number, indicates an original article

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SOCIETIES

Abbreviations
Acad —Academy
Am —American
A —Association
Conf —Conference
Cong —Congress
Internat —International
M —Medical Medicine
Pharm —Pharmaceutical
S —Society
Surg —Surgical Surgery Surgeons

Am A for the Study and Prevention of Infant Mortality **1387, 1644, 1737**
Am A of Obstetricians and Gynecologists **812, 1200, 1210, 1316**
Am A of Ry Surg **1553**
Am Climatological A **472**
Am Gynecological S **57, 140, 220**
Am Hospital A **1387**
Am Institute of Criminal Law and Criminology **1813**
Am Orthopedic A **391**
Am Pediatric S **66, 138**
Am Public Health A **1200**
Am Roentgen Ray S **1209, 1306, 1484**
Am S for the Advancement of Clinical Investigation **137 218**
Am S of Tropical M **297**
Am Surg A **217, 300**
Am Therapeutic S **394**
British A for the Advancement of Science **953 1196 1209**
British M A **381, 457 663, 1558, 1900, 1994, 1995 2075, 2107**
Colo State M S **1384**
Conf of Secretaries of State S **1642**
Cong of Clinical Surg of N Am **661, 1900**
Del State M S **1463, 1736**
Fla M A **62, 581**
French Internists A **1807**
French Surg S **1901**
German Anthropologic S **815**
German Neurologic A **1902**
Ind State M A **1581 1643, 1817**
Internat Cong for General and M Electrology and Radiology **2169**
Internat Cong of Deaf Mutes **732**
Internat Cong on Gynecology and Obstetrics **1305**
Internat Cong on Hygiene and Demography **44 214, 662, 731, 812, 1198 1207, 1207, 1208, 1311, 1382, 1394, 1480**
Internat Conservation Cong **1383, 1393**
Internat Eugenics Cong **555**
Internat League for the Study and Prevention of Epilepsy **1045**
Internat M Cong, **285, 952 2087**
Ky State M A **1726, 1917 1998**
Mass M S **127**
Mich State M S **203**
Military Surg A of U S **730 1303 1503, 1739**
Minn State M A **742, 823**
Miss Valley M A **889, 1307, 1636, 1735, 1817**
National A for the Study of Pellagra **554, 889 1467**
Nev State M A **950, 1465**
N J M S **477**
N Mex M S **1552**
N C State M S **44**
Ore State M A **204**
Pa State M S. **646, 888, 1386, 1479, 1564 1814**
Paris Acad of M **550**
Philadelphia Coll of Phys **1899, 1918**
Philadelphia Co (Pa) M S **660, 951 1647 1899, 1986, 2277**
R I M S **45, 49 1302**
Royal Statistical S **813**
Southern M A **661, 731, 1466 1899, 1999, 2000 2181**
Southwest M A **812 1466 1560**
Utah State M A **812 1387**
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Bierhoff T A (68) 1405
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Billington W (12) 1406
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Bishop R H (17) 967
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Blesh A L (74) 748
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Brookes W C (43) 1401
Brooks C D (98) 976
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Burnam C F **698**, (15) **1743**
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Burnett J (21) **1222**
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Burr C W (84) **483**, (6) 2091 (83) 2287
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Cameron M B (13) **1820**
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Campbell O H ***1200**
Campbell W A **472**, (39) 2006
Campbell W C (109) 224 (86) 1827
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Miller G B (24) 64
Miller H A ***770**
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Mitchell L J C (24) 71
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Miura S, (70) **907**
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Mizell, G C (67) 1573
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